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ON

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LECTURE III.[1]

Delivered on March 26th.

MR. PRESIDENT, FELLOWS, AND GENTLEMEN,—The doctrines of Professor Sigmund Freud on the subject of hysteria and other neuroses have not been generally known in England till within the last few years, since they were at first published in a tentative and disconnected way, and only in German. But lately an American translation of his principal work has appeared, and his theories have been expounded in England by Dr. Bernard Hart, Professor W. Brown,[2] and Dr. David Forsyth, so that doubtless they are familiar to many of my audience. But in view of their original character, of the wide application that has been made of them, and of the keen controversies to which they have given rise, it is necessary that I should attempt some exposition of them.

THE VIEWS OF PROFESSOR FREUD.

They originated, historically, in observations made by Dr. Joseph Breuer, and by Freud himself, some 30 years ago. The first case reported by Breuer was briefly as follows:—

> A young woman under the strain of nursing her father developed a severe hysteria with manifold symptoms. Among these symptoms was a sort of alternating mental condition. Thus at certain times of the day she was excited and had hallucinations; at others she was somnolent, and at others again normal. While in the somnolent phase, a sort of auto-hypnosis as it seemed, she uttered sounds and disjointed phrases which were discovered to relate to previous events of her illness, and it was found possible by suitable encouragement to get her to talk of these events, and to express her feelings concerning them. After such a talk she was always better. Artificial hypnosis was then substituted for the auto-hypnosis, and then further progress was made. She could narrate precisely the conditions which had given rise to particular symptoms, and after that, provided the emotion appropriate to the occasion manifested itself, the symptom in question disappeared. This was called the "talking cure" or "chimney-sweeping," or in more dignified language "katharsis."

Summary of Earlier Conclusions.

This method of treatment was applied by Breuer and by Freud to other cases, and from a study of them were derived their first conclusions about hysteria, which may be summarised as follows:—

1. That a hysterical symptom may originate from some disagreeable occurrence, the memory of which is still active, though it has passed from the patient's consciousness.

2. That the symptom can be cured if this memory can be revived in consciousness, and if the patient can be brought fully to relate the occurrence and to express the emotions to which it gave rise.

3. That the reason why the patient has forgotten the disagreeable occurrence which has so affected him—the mental trauma, as it may be called—may be of two kinds: Either (*a*) because when it arose he was in a condition of inattention to his surroundings, a sort of day-dream or state of incipient double consciousness. These states, which Breuer calls "hypnoid," he considers to be common in hysterical patients. In genuine traumatic hysteria the mere shock or fright may produce such a state *de novo*. Or (*b*) because the memory of the occurrence is so disagreeable to the patient that he has voluntarily banished it from his consciousness. The hysteria has then arisen by way of "repression" and is designed to protect the patient from objectionable memories. Such hysteria by repression is called by Freud a "defence-neurosis," and it is apparently the only kind of hysteria which he now recognises.

4. What is the relation of the hysterical symptom to this repression of the memory or idea? The answer is that though the patient may successfully banish from his consciousness the disagreeable idea, yet he cannot thus rid himself of the emotion which attends upon it, the "affect" as it is technically termed; and this would remain as a source of distress were it not that hysterical patients have the faculty (so it is said) of directing this emotion into bodily channels and thereby converting the affect into a symptom, such as pain, spasm, paralysis, and the like. But when the original idea, the skeleton in the secret cupboard of the mind, has been dragged out into the light of consciousness, and the emotion stirred by it has been poured forth in words or tears or passionate display, then the symptom which represented the emotion is no longer needed, and disappears. This is cure by "katharsis." It is, as Aristotle said of tragedy, "a purge for the emotions."

Later Development of Theories.

No doubt these views are simple and attractive. One might doubt, perhaps, the universal efficacy of treatment by "katharsis," and one might ask for much more evidence and explanation concerning the supposed hysterical faculty of "converting" emotions into symptoms. Still we recognise the emotional element in hysteria, and we recognise also the relief given to pent-up feelings—by tears, or perhaps by oaths. But such simple statements are very far from representing the theories developed later by Freud. In these latter, it is true, hysteria remains as a type of a "defence-neurosis," based on the repression from consciousness of disagreeable ideas. But this power of repression is elaborated into a mental faculty which forms the keystone of a large system of psychology. Secondly, the simple plan of hypnotism, followed by "katharsis," is replaced by the method of psycho-analysis. Thirdly, the particular class of ideas and events at the bottom of hysteria, and indeed of all neuroses, is declared on the testimony of psycho-analysis to be solely the sexual class.

Now, it would appear that Freud arrived at his larger theories partly by studying dreams (his own and those of his patients) with the aid of psycho-analysis, partly by studying the symptoms of neurotic patients in the same way, and partly (as it seems to me) by sheer speculation.

The "Censor" and the Unconscious Mind.

The object of psycho-analysis is to bring to light ideas which have been lost to consciousness or

[1] Lectures I. and II. were published in THE LANCET of April 25th (p. 1163) and May 2nd (p. 1233), 1914.

[2] THE LANCET, April 19th (p. 1114) and 26th (p. 1182), 1913.

which, it may be, have never been apprehended in consciousness. For, according to Freud, the greater part of our mental activity is unconscious. There is within our mind a great mechanism or system of the Unconscious, which receives impressions, stores them in memory, and groups them together by association. Moreover, in this same system, or chamber, of the Unconscious are domiciled the emotional elements of our being, appetites, impulses, and desires, which are constantly striving for an outlet in action and in conscious thought. But before they can arrive at their goal they must pass through another stage called by Freud the Fore-conscious or Pre-conscious. Into this stage they cannot pass till they have been brought into conformity with certain standards, rules, and regulations; but once having been brought into such conformity they can pass into the stage of the Fore-conscious, ready to be called up into conscious thought or action. This sounds so obscure that I will venture on an analogy. You are going to pay your respects to Royalty. You gather together without any formality in certain suites of spacious rooms. These I compare with the Unconscious. Going on with the stream you must pass a door, where certain lynx-eyed officials stand, who may require you to correct any error in your costume, under pain of being turned back. Once past that door you find yourself, not indeed in the Presence, but in an ante-chamber, which you may call the Fore-conscious, and ready at the beck of the authorities to be called into the Royal presence, which I venture respectfully to compare to the highest stage, that of conscious thought.

Now the standards, rules, and regulations, to which our thoughts must conform before leaving the Unconscious, have been elaborated by the many influences which have been brought to bear on each individual in the course of his life—education, religion, public and social opinion, previous experiences, previous mental conflicts, and the like. Such influences are summarised, I might say personified, by Freud under the title of the "Censor." The Censor determines what thoughts and strivings from the Unconscious shall be allowed to play their part upon the stage of consciousness, or again he can withdraw his licence, and relegate them back to the Unconscious. But there for good or evil they still exist, and it is asserted that by means of psycho-analysis we can find them out.

A great discovery, if only it be true.

The Process of "Free Association."

Now the assumption has to be made that our thoughts are not determined by chance or by our own volition, but that thought follows thought as surely as event follows event in the physical world; and further, that if any occurrence or thought in the past has given rise to a chain of thoughts which eventuates in a symptom or an idea in the present, this chain can be traced back from the present to the past. For contemplation of the present idea will cause an associated thought of the past to arise in the mind, and contemplation of that thought a further one, and so on from thought to thought till the whole chain can be unravelled. This is called the process of "free association." We must emphasise the word "free." It means freedom, not only from external interference, but also from interference from within. For if the unravelling of associations leads to thoughts which do not meet the demands of the Censor they will be repressed by him, so that either they will not rise to the surface at all or else they will arise in a modified, perhaps an unrecognisable, form.

Psycho-analysis.

The actual process of psycho-analysis is much as follows. The patient must give his willing and intelligent coöperation, and for this it will probably be necessary to furnish him with some explanation of the method to be followed. And first he must give a full and detailed account of his symptoms and the history of his illness so far as he can consciously remember it. It is to filling up gaps in this account or to the explanation of particular symptoms that the psycho-analysis is primarily applied. (I defer for the present the consideration of dreams.) For this he is placed in a restful position, on a couch or chair, usually with his eyes closed, and is told to concentrate his attention on the circumstance or symptom under consideration, and to say what thoughts come into his head or what pictures arise before his mind's eye in connexion therewith. His attitude is to be simply one of contemplation; he is not to try to think of appropriate things, nor yet in any way to criticise the thoughts that do occur to him, but simply to let them come, and to tell them to the physician, no matter how trivial, irrelevant, ridiculous, or disagreeable they may seem to be. From the thoughts or pictures thus obtained others will be obtained, and so on, I must not say *ad infinitum*, but until something essential or important has been reached. It is for the physician, I presume, to settle when to stop, and for him also to settle during the process what clues are to be followed up. In most cases, at any rate, a long process of disentanglement of ideas is to be expected; success in which process will depend partly on the facility with which the patient can produce mental pictures, and partly on the skill of the physician in selecting likely lines of research.

Now if, as I should imagine is often the case, the patient says that no thoughts will come, this, according to the psycho-analyst, is due to the action of the Censor. Thoughts are there, and probably important ones, but they are barred because they are disagreeable to him, or lead up to others that are disagreeable. The patient must be assured that thoughts are ready to come, and if by urging or persuasion or any other means he can be brought into a more contemplative and less critical frame of mind, it is said that they will come.

To an outsider it must be owned the situation seems to be peculiar and even to have a touch of comedy. It reminds one irresistibly of the "thinking shop" in the *Clouds* of Aristophanes, where the old country bumpkin Strepsiades is lying on a couch—less clean and comfortable than the couch in a Harley-street consulting-room—and Socrates, who is in vain trying to extort some ideas from the old man's head, says:—

Σω. Οὗτος, τί ποιεῖς; οὐχὶ φροντίζεις; Στ. ἐγώ;
νὴ τὸν Ποσειδῶ. Σω. καὶ τί δῆτ' ἐφροντίσας;
Στ. ὑπὸ τῶν κορέων εἰ μού τι περιλειφθήσεται.

. . . . . .

Σω. οὗτος, καθεύδεις; Στ. μὰ τὸν Ἀπόλλω 'γὼ μὲν οὔ.
Σω. ἔχεις τι; Στ. μὰ Δί' οὐ δῆτ' ἔγωγ'. Σω. οὐδέν πάνυ;

. . . . . .

Σω. μὴ νυν περὶ σαυτὸν εἶλλε τὴν γνώμην ἀεί,
ἀλλ' ἀποχάλα τὴν φροντίδ' εἰς τὸν ἀέρα,
λινόδετον ὥσπερ μηλολόνθην τοῦ ποδός.

Socrat. Are you not thinking?
Strep. Certainly I am.
Socrat. What was your thought then?
Strep. I was wondering
How much these bugs would leave upon my bones.
(Socrates reproves him and proceeds):

Socrat. Now, are you sleeping?
Streps. No such luck, by Heaven.
Socrat. What have you got then?
Streps. Nothing.
Socrat. Nothing at all?
Streps. Nothing, but what I have in my right hand.

(The real reply is too Aristophanic for translation, and too Freudian.)

(Finally Socrates explains to him the frame of mind desired:)

Socrat. You keep your thought too centred on yourself.
Let it soar freely in the boundless air,
Just like a beetle threaded on a string.

You might call that "free association."

Another difficulty may be that the productions of the patient seem to be utterly irrelevant and meaningless. This, too, is put down to the action of the Censor. Such futilities are supposed to represent thoughts which in their original state he will not allow to pass, and therefore they have been dressed up, as it were, in a fantastic guise and in this way have slipped past the Censor into Consciousness. To utilise them the physician must interpret them in a symbolic sense. This interpretation by symbols is a very important matter, but I will return to it later.

A Modification of the Procedure.

To be complete, I ought to mention here a modification of the process of psycho-analysis introduced by Professor Jung, of Zürich. A long list of a large variety of words is made out. These are read out one by one to the patient, and he is told to answer to each one, as quickly as he can, with the first word that comes into his head in connexion with each word that is read out. The time taken for each answer is noted on a stop-watch, and it is generally found that he is much longer in answering to some words than to others. This tardiness in reaction is assumed to be due to the fact that the word has called up by association some idea or memory that is disagreeable to the patient and which he therefore tries to repress. It indicates, we are told, "a repressed complex." "Complex" seems to me an unfortunate word, but it is used in this connexion to indicate an idea or system of ideas with which is bound up some powerful feeling. Now if the assumption made about the reactions to the test words be correct, we can find out by them the existence of such "complexes," and possibly, from the nature of the patient's replies, make some sort of guess as to the nature of the "complexes." So that, as Dr. Forsyth points out, this method may serve as a useful preliminary to a psycho-analysis, by enabling us to determine what tracks to follow out.

Difficulty of Psycho-analysis.

I believe that the above description fairly represents the process of psycho-analysis as described by Freud and his followers. If it be objected that in this description I have mixed up theory with practice, I reply that that is exactly what they do. Thus any hitch in the process is put down to the action of the Censor, whereas the very assumption of such a Censor is only justified by the results of the process itself. And the same for other assumptions made about it. But let us defer criticism for the present; enough has been said to show that the method of "free association" is not so easy as those terms might imply; indeed, what with the numbers and complexity of the possible trains of ideas, the barriers or "resistances" to their appearance interposed by the Censor, and the distortion of thoughts produced in their struggle for emergence, the psycho-analysis of a case may be a very difficult process. And also a very long one: Freud tells us that one of his cases was unfinished at the end of five years.

Upon data obtained by this method is built up the whole system of Freud—whether principally upon the psycho-analysis of dreams or upon that of cases of hysteria, it is hard to say, for he refers us from the one to the other in a way that is puzzling. But since he tells us that the interpretation of dreams is the "*via regia*" to a knowledge of the unconscious, I must not evade his views on that subject, and must tax your patience while I try to explain them.

Interpretation of Dreams.

We all know the dream as it presents itself to the dreamer—generally a sort of moving picture of persons, things, and situations, a picture which differs strangely from our waking thoughts, but in which nevertheless we can generally recognise fragments of our waking experiences grotesquely pieced together. This Freud calls the *manifest* dream: it is to be sharply distinguished from the thoughts which really prompt it, which he calls the *dream thoughts* or *latent* dream. The manifest dream is a representation of the dream thoughts, but they are so altered and distorted that without interpretation they are unrecognisable. They are there, it is true, but they are jumbled, confused, and symbolised to such an extent that the manifest dream may be compared to a picture puzzle or a hieroglyphic, which needs deciphering to get at the dream thoughts.

How and why does this distortion take place? The "how" involves several processes; and I must mention some of them, since a knowledge of them is necessary for interpretation.

1. An object in the manifest dream may be compounded from several elements in the dream thoughts; this is called "condensation"; just as we may suppose a centaur to be compounded out of a horse and a man, or a mermaid out of a girl and a fish, or, to take words, just as we talk of the "Bakerloo" railway.

2. Allied to this is the process of "over-determination." A number of things in the dream thoughts may converge, or be piled up, as it were, so as to produce one thing in the manifest dream. Say you have been travelling abroad and the night of your return you dream of lions. Perhaps you started from the city of Lyons in France, read a book on the journey about big game shooting, and as you drove out of Charing Cross Station saw the name of Lyons over a tea shop. Thus the lions in your dream were over-determined.

3. "Inversion." The dream may invert the dream thoughts or take them in the wrong order, so that for interpretation it must be read backwards like Chinese. We might dream first of having a son and heir and afterwards of getting married; or a candidate for examination might dream he came out bottom of the class list because he really wished to come out top.

4. "Displacement of values." This means that the importance or the feelings which attach to a particular element in the dream thoughts are in the dream transferred to something else, or suppressed or disguised. In dreams, perhaps in dreams only, we love our enemies. We might adopt a strange child, because we really felt anxious how to support our own. We might ask a crossing sweeper for a cheque, or give a penny to a millionaire. A

young man, says Freud, dreamed that he had a hole in his overcoat and was terribly shocked at it. The rent had really been in something else. In technical language, the "affect" was transferred.

5. Dream thoughts may be expressed in the manifest dream by symbols, whereof the dreamer himself, whether asleep or awake, does not know the meaning.

6. We are further told, though this is less obvious, that just as the dream picks up the happenings of our daily life and weaves them into a sort of drama, so in order to complete this drama it picks up the fancies and day-dreams in which we may have indulged in our waking hours, and incorporates them into the drama of the dream. This is called "secondary elaboration."

All these processes, and others which I pass over whereby the dream thoughts are transmuted into the manifest dream, are called the "dream work." But why should there be any such dream work? What need is there for all this elaborate misrepresentation? The answer given is this. Our dream thoughts are thoughts which in our waking state we do not recognise as desirable, and therefore the Censor rigorously represses them. But when we sleep, the alertness of the Censor, like that of our other faculties, is dulled, and then is the opportunity for such thoughts to crowd into consciousness. Nevertheless the Censor sleeps, as has been said, with one eye open; and therefore the dream thoughts must assume a disguise in order to evade him and get through into consciousness.

For simplicity's sake, I have omitted the consideration of certain types of dream, which are very common, such as dreams of falling, of flying, of being without clothes in the presence of others, and also of the important fact that the physical condition of the dreamer has an effect upon his dreams. About these things Freud has his special views, which will not commend themselves to everybody.

Causation of Dreams.

Why should we have dreams at all? According to the theory we are considering, dreams are caused by the striving of deeply buried impulses towards conscious gratification. This, apparently, is the final meaning of Freud's well-known formula, "the dream is a fulfilment of a wish." Now at first sight that seems a most untenable proposition. We often have dreams that we should be sorry to see fulfilled, and oftener still our dreams seem to have no relation to our wishes at all. But we must consider two points.

First, that the wish is contained in the dream thoughts, and must be sought there, not in the manifest dream where it has been efficiently disguised. Perhaps we may except some of the simple dreams of childhood, which may be understood without interpretation.

Secondly, what does Freud mean by a wish? In the earlier parts of his book he certainly speaks of very ordinary everyday wishes as being fulfilled in dreams, such as the wish to obtain an appointment, the wish to meet a particular person, the wish to go on sleeping, or even the following somewhat ludicrous position of affairs. A man dreamed a dream which he said the professor could not interpret as the fulfilment of a wish. Nor could he, until the interpretation occurred to him that the wish in the man's mind was that the professor might be shown to be in the wrong! But later Freud indicates that such banal wishes are not sufficient by themselves to produce a dream unless they can borrow energy from some of the primitive unconscious desires which are always struggling to emerge into consciousness. In his own words, "A conscious wish is a dream inciter only if it succeeds in arousing a similar unconscious wish which reinforces it." And further, though he does not distinctly assert it, yet it is more than once hinted and implied by him that the chief unconscious inciter of dreams is the sexual desire. Thus a most important modification has been introduced into the original simple meaning of the word "wish." Why it should have been introduced is not clearly explained; I presume, however, partly because further and more prolonged psycho-analysis pointed that way, partly because this modification brought the theory of dreams into correspondence with his completed theory of hysteria and neuroses in general. To which theory, Sir, I must now turn again.

Theory of Hysteria.

Hysteria, he says, like the dream, is based on unconscious thoughts which have been repressed or modified by the agency of the Censor, and the symptoms of the disease, like the pictures of the manifest dream, have to be interpreted by psycho-analysis. But these unconscious thoughts have always a sexual basis. Indeed, in Freud's view this is the basis of all neuroses. He makes this sweeping assertion: "In a normal sexual life no neurosis is possible."

This is a great departure from the original theory of Breuer, according to which the psychical trauma, the memory of which gave rise to the hysteria, might be constituted by any disagreeable event; and it sounds strange, in view of Breuer's first case (quoted above), in which the sexual element was conspicuous by its absence. How, then, was this dictum arrived at? So far as I can make out by the persistent and extensive use of psycho-analysis, which showed that when a history was traced back far enough repressed sexual ideas always emerged. At one stage of his investigations, on the basis of 13 cases, Freud stated that the events which started these ideas were actual criminal assaults on the patient in early life. This statement, as you may easily imagine, had to be given up; the stories of the assaults were simply "phantasies" of the patient, which both he and the psycho-analyst erroneously took to be true. The factors originating the hysteria had then to be sought still further back in life. From this necessity, it would seem, arose Freud's theory of sexuality in the infant. This theory is ingenious and interesting, but to my mind improbable and extremely disagreeable. Nevertheless, it holds such an important position in the views of Freud and his stricter disciples that I must ask your leave, Sir, to give the outline of it.

Infantile Sexuality.

The child, contrary to what is generally thought, has sexual feelings long before the age of puberty, indeed, from his earliest infancy. But this infantile sexuality differs from that of the adult in several particulars. It is unconscious, and not recognised by its possessor in any more definite sense than that of a vague impulse which seeks gratification. It has not the definite scope and definite external object that come in later years; and several regions of the body, not one only, can minister to its gratification. It may therefore be called "auto-erotic" and "polymorphous." It has in itself the germs of all adult

sexual impulses, not only of those which are recognised as right and proper, but of those which are perverted and wrong. The right adult sexuality has to be evolved from it by severe processes of restriction and repression.

To follow this out in detail would not be desirable in a lecture, but I may give some brief indications of what is meant. When the auto-erotic impulse of the child first turns to an external object that impulse is bisexual; the homo-sexual element in it has to be suppressed, in order that the individual may become normally hetero-sexual. The first external object of the infant's desire—namely, his mother—must wane, lest in later life he be left under the domination of the so-called Œdipus-complex. The outlying regions of his body—skin, mouth, anus—or so-called "erotic zones," which originally helped to gratify his desire, must be suppressed in favour of the proper genital zone. I shall not elaborate these points; most of them are disagreeable, some like the following one are simply ludicrous. Thus we are told that a predominance of the "oral zone" (mouth and lips) is indicated by a persistent habit of thumb-sucking. This is supposed to give the child some kind of sexual pleasure. One would naturally have thought the pleasure was connected with the remembrance of taking food. Such children, says Freud, become as adults "habitual kissers, and show a tendency for perverse kissing, or as men they have a marked desire for drinking and smoking." I hope, if only for my own sake, that this is not true. Yet such according to our modern Struwelpeter is the fate that

comes
To little boys who suck their thumbs.

And so on through a whole gamut of vicious propensities—sadism, masochism, exhibitionism, and the like—all of which are said to have their root in the undifferentiated sexuality of the infant. Though what positive evidence there is for these statements I really cannot discover.

The Mental Conflict in Hysteria.

Now the doctrine of hysteria is connected with this doctrine of infantile sexuality in this way. The infant, though sexually minded, is not worried by that fact. He is shielded by ignorance and lives happily in his garden of Eden. As he grows up the stream of his sexual impulses is narrowed and directed into proper channels by education and other influences. But with the arrival of puberty and under the stimulus of physical sexual development the strength of this stream is enormously increased. If the old channels are insufficiently obliterated they may be opened up again, and with such reopening comes the danger of sexual perversions. Add to this the change that has now taken place in his mental outlook; for consciousness is now directed upon the sexual sphere, which was previously hidden, and further, the revelation of it may take place in some sudden or disagreeable way. Then, to avoid the conflict between the stirrings of a natural impulse and the repugnance felt for the distasteful sexual idea, the individual resolves to banish this idea from consciousness. The Censor bans the play. But he cannot stifle the desires and feelings which prompt it. They must have an outlet, and in the case of hysteria this outlet is provided by the "conversion" of them into bodily symptoms.

The Process of "Conversion."

Now in this so-called process of conversion there is much that is not clear to me. It is not obvious why the faculty of conversion should be only possessed by hysterical patients, nor what is its precise mechanism, nor why hysterical symptoms should satisfy desire, nor why, if the desire is always the same—namely, sexual—the symptoms that satisfy it should be so manifold. To meet this last difficulty we may perhaps introduce a further statement of Freud. He says that hysterical people have the habit of indulging in "phantasies"—that is, day-dreams, reveries, or castles-in-the-air. The content of these day-dreams is generally (so he says) erotic, in women always so. To the desire that prompts them these phantasies stand in the same relation as does the manifest dream to the dream thoughts, and like the manifest dream they have to be interpreted by psycho-analysis. It is these manifold phantasies which are converted into the manifold symptoms of hysteria. Thus, the parent of the symptoms is the phantasy, and the parent of the phantasy is the original sexual motive; or if you wish to connect the symptoms more directly with the motive you may use the language of the stable, and say that they are bred out of Fancy by Desire. The whole thing sounds very hypothetical, and we are told, indeed, by Freud that the relation between the symptoms and the phantasies is a complicated one and only to be understood by psycho-analysis.

Summary of Theory.

I will endeavour now to make a short summary of this complicated theory of hysteria.

The infant has sexual feelings, inchoate, indeed, and unconscious, but so extensive and generalised that the germs of all adult sexuality, normal and abnormal, exist therein. Gradually to restrict this infant sexuality, by damming up undesirable tendencies, or by directing them towards other than sexual objects, such as the arts, poetry, and the manifold objects and ambitions of life, is the work of education and of the higher human faculties. But when in the course of physical development sexual ideas and aims press themselves to the front a struggle ensues between these opposing forces. "The flesh lusteth against the spirit and the spirit against the flesh." Certain individuals terminate this struggle by forcibly banishing the offending sexual idea from consciousness. But it continues to exist in the "unconscious"; and, moreover, the "affect," the emotion or feeling connected with it, cannot be thus banished. This "affect" is then dealt with by "conversion," which means that an outlet is provided for it into bodily channels, and thus arise the bodily symptoms of hysteria. So hysteria is called a "defence-neurosis" because it shields the patient from distasteful ideas and the feelings aroused by them.

There are other defence-neuroses, according to Freud; for instance, that which is known as the "compulsion-neurosis," which embraces apparently such conditions as imperative ideas and the majority of "phobias." In these, as in hysteria, there has been repression of an unpleasant idea, but the "affect," instead of being converted into a bodily symptom, remains and attaches itself to some innocent and otherwise unimportant idea, and from that vantage ground still torments the patient's consciousness. Paranoia is said to be also a defence-neurosis, but with a different mechanism.

All these diseases have a mental origin; they are "psycho-neuroses." There are others, simple neuroses, the mechanism of which is principally physiological. Among these Freud places neurasthenia, using the term, I presume, in a limited sense, which he asserts (on what evidence I know

not) to be due to self-abuse, and the so-called "anxiety neurosis," which he ascribes to insufficient sexual gratification and particularly to coitus interruptus. To these neuroses, which stand outside his theory of hysteria, he does not apply psycho-analysis; and this is odd, because he applies it to almost everything else with a persistency which sometimes lands him in the ridiculous.

What Evidence is There?

The author of this theory which I have been endeavouring to expound, Professor Sigmund Freud, has devoted many years to the elaboration of it; he has urged it with admirable ingenuity, and with a wealth of illustration which cannot be reproduced in a sketch like the present; he has extended it over a wide psychological area, ranging from the masterpieces of literature to the happenings of everyday life; and as regards the therapeutics of the psycho-neuroses he seems to be regarded by some physicians as a sort of Moses who points the way to the promised land. Small wonder, then, that he has an enthusiastic following; small wonder, too, if you regard the content of his doctrines, that there are rebellious physicians among us, who say with Korah and his company, 'We will not come up."

Now let us admit freely that the theory incorporates some factors which are *veræ causæ*, and not imaginary. Repression of primitive instincts and desires, and of many other motives, must go on in any civilised or moral person. The strength of the sexual motive and the need for government and occasional repression of it cannot be denied. The doctrine of "conversion of the affect," though very hypothetical and vague, yet recognises the large part played by emotion in hysteria, and tries to account for the bodily manifestations of that disease. But these are generalities; to prove an elaborate theory like the present, more precise evidence must be called. What evidence is there?

The answer made is, the evidence derived from psycho-analysis; and those who presume to doubt the validity of this evidence are told pretty plainly that it is beyond the criticism of those who are not themselves experts in the method. They are reminded that histological questions can hardly be discussed except by microscopists, nor chemical problems except by those who have worked in a laboratory. But the parallel is not exact, for it is the method itself of psycho-analysis that is called in question—a method that involves many uncertainties and many assumptions. Outside criticism must therefore obtain a hearing, unless psycho-analysis is to become a purely esoteric cult.

Critical Remarks.

The method, and indeed the whole of Freud's theory, presupposes a determination in mental phenomena as strict as that in the physical universe, so that one thought follows another thought as surely as event follows event. Those of us who are the most steeped in physical science will be the most ready to assent to this. But I doubt whether the average man will endorse it as a universal truth; he will refuse to accept such a dreary fatalism. And indeed the semi-personified Censor of Freud seems a little inconsistent with it, he reminds one too much of those old-fashioned entities, Conscience or Free Will. But let this pass.

Then psycho-analysis professes to take present thoughts, symptoms, or dreams, and to follow them up through a series of past thoughts to those which have been long forgotten, or which, perhaps, never entered into consciousness at all. Is this possible? Only, I imagine, within narrow limits. Any one of us may have occasionally caught himself thinking of something, and, wondering how it came into his head, may have rapidly run back over his thoughts and found what started them in the present direction. But this is a process undertaken at once, concerning recent thoughts, which have been in consciousness, which have patent connexions with each other, and which are revived by conscious effort. Matters may be very different in psycho-analysis. The process may have to be carried back over many years, perhaps to the thoughts and desires of infancy. The successive pictures that arise in the patient's mind may have no apparent connexion with each other—at least, he is not encouraged to look for any. The thoughts which we desire to unearth may have never been present to consciousness at all.

May we not justly doubt whether the things which come into the patient's head during examination really represent the thoughts he had long ago? All sorts of things may have happened in the meantime to obscure the original thoughts and to start different associations. His circumstances now are different to what they were then. And at least there is one new circumstance of the greatest importance, that is the presence and influence of the operator.

For in any but the simplest cases the operator will have to search among the patient's thoughts for clues to the riddle of them, and must form guesses and working hypotheses about the answer to this riddle. He can hardly avoid guiding the patient, consciously or unconsciously, in the direction of these guesses, especially if the patient be a quick-witted neurotic ready to divine the direction in which he is being led. In such a case the free association is no longer free.

There is a still greater danger to freedom when the patient's thoughts have to be interpreted by the operator. This must be done when they appear trivial or absurd or without bearing upon the subject in hand. Now to trace out the effects of the processes which have been described as "dream work"—condensation, inversion, transposition of "affects," and the like—evidently leaves much to the predilections of the operator, even if we assume Freud's canons about dreams to be correct. But how much more is left to him, when interpretation by symbols is employed? You may gather this from Freud's own words:[3] "In the symbolic interpretation of dreams the key to the symbols is arbitrarily chosen by the operator." How arbitrary this choice may be we learn from his chapter on the Material of Dreams. He says: "When one has become familiar with the abundant use of symbolism for the representation of sexual material in dreams, one naturally raises the question whether there are not many of these symbols which appear once and for all with a firmly established significance like the signs in stenography, and one is tempted to compile a new dream book according to the cipher method." (Such a lexicon of dream language has actually been prepared.) Then follow illustrations in which a whole variety of common objects are thus interpreted, regardless of the fact that they might just as well be interpreted some other way. Why should you think that a staircase means coitus or that a lady's hat means something grossly sexual? or why, if you think so, should you tell her so? Yet

[3] Interpretation of Dreams, Brill's Translation, pp. 245, 257, 316.

this has actually been done. And when Freud says: "There is no series of associations which cannot be adapted to the representation of sexual facts," one may reply—"of course, if you are determined to adapt them that way." In another of his writings[4] he says, "He who can interpret the language of hysteria can understand that the neurosis only deals with the repressed sexuality." One strongly suspects that the meaning of that language was invented by the interpreter himself.

I know that it has been said, in relation to this aspect of the question, that by sexuality Freud means something very large—that is to say, all kinds of emotions which can be connected with or find their root in the sexual sphere. Such a meaning may indeed be necessary to give to his theories that wide scope and extension which he desires. But the bedrock of his theories and of psycho-analysis as practised by him is sex in its barest and least attractive form. Let anyone read the "Interpretation of Dreams" and the "Three Contributions to the Sexual Theory" and judge for himself.

Again, it is said that the sexual factor is unessential and can be omitted from the new psychology. Professor Jung[5] appears to be discarding it as fast as he can. For sexual desire he substitutes desire in general, "*élan vital*," innate energy. When in the battle of life the energy of the individual meets insurmountable obstacles it turns back, or "regresses," towards the phantasies of childhood, and develops from them neurotic symptoms. The initial difficulty is the present obstacle, and not in the infantile past. This may or may not be true, but it is not Freud. Indeed, one wonders how two such distinguished exponents of the psycho-analytic method can have reached by it such different results. Besides, what thin and unsubstantial suppositions have we here been brought to. To adduce them in support of a theory is merely, as Aristotle would say, ἀπάγειν εἰς τὸ ἄλογον.

Therapeutic Value of Psycho-analysis.

There remains the question of the therapeutic value of psycho-analysis. It began as a therapeutic method—the katharsis or confessional treatment of Breuer—but of this we hear little now. Instead, there remains the psycho-analysis by which we hope to discover the paths and the places where the patient first left the road of health, so that by reëducation and appropriate suggestions we can set him in it once again. And if psycho-analysis be necessary for this object, and if it be reliable (about which I have expressed my doubts), I presume it must be used. But I cannot think that it is suitable for general use. The old ideal in therapeutics was expressed in the words "Tuto, cito, et jucundo." We will agree that "jucundo" is the least important point. No doubt Naaman the Syrian did not like the look of the waters of Jordan. Still one must allow that there are many things in one's physical and mental economy which one would rather not expose to view. Were I being treated for dyspepsia I would rather not see the semi-digested contents of my stomach. It would not give me an appetite for the next meal. And similarly for many things that may be lurking in obscure corners of our minds. Freud chose for his dream book a most appropriate motto, "Flectere si nequeo Superos, Acheronta movebo." And he might have added, on his own showing, that the heart of man is "deceitful above all things and desperately wicked."

The other two points, the "tuto" and "cito," are in this case, I hold, essentially connected. Given a rapid and reliable method of bringing the patient to grips with his condition, and of directing his thoughts into healthy channels, we shall all welcome it. But if we are to go on for weeks, months, perhaps years, with a kind of mental vivisection, teaching the patient the while to revive and study all sorts of forgotten facts and fancies, and perhaps to invent new ones—then I fear the process will simply favour the growth of morbid habits of mind, and in the case of a psycho-neurotic will defeat the very object of treatment, which is to drag the patient out of the stuffy chambers of his own mind into the open air of everyday life.

But putting therapeutics aside, the main outstanding question is whether psycho-analysis can be trusted as a means of investigation. Does it really supply a means of penetrating the arcana of our minds? Is there any corroborative evidence of its value? Freud's whole system of psychology is based upon it—an imposing structure, it is true; but if psycho-analysis fails, an edifice without foundations.

[4] Papers on Hysteria and other Psychoneuroses, No. ix. The Rôle of Sexuality in the Etiology of the Neuroses (p. 192 of Brill's translation).

[5] Discussion on Psycho-analysis at International Medical Congress of London.

MASSIVE COLLAPSE OF THE LUNGS FOLLOWING ABDOMINAL OPERATIONS.

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IN the Bradshaw lecture[1] of 1908 Dr. W. Pasteur discussed the nature of massive lobar collapse of the lungs, as contrasted with the scattered lobular collapse that occurs passively when the bronchioles are obstructed by secretion and the alveoli are slowly emptied by absorption of their air into the circulating blood. A familiar example of the latter is seen post mortem in the small areas of collapse in a child's lung with broncho-pneumonia. Massive collapse of the entire lobe of a lung develops, according to Pasteur, under one or the other of two conditions: 1. As the result of complete paralysis of the inspiratory muscles, either the intercostals or the diaphragm. The change is occasionally seen in post-diphtheritic neuritis. 2. As the result of a reflex inhibition of the diaphragm's respiratory movement, which may sometimes occur after an abdominal operation, and so lead to alterations in the lung which closely simulate those of ordinary pneumonia.

In two subsequent papers[2 3] Dr. Pasteur developed with greater precision the clinical picture of such post-operative collapse, and showed clearly the need to distinguish it from post-anæsthetic pneumonia, or even at times from pulmonary embolism. It appears after either ether or chloroform, and may develop at any time in the first week after the laparotomy. In some of his cases there was no sepsis nor consciousness of pain from the abdominal wound, and the symptoms of lung trouble appeared to arise quite suddenly. After a few hours, during which the patient may complain of an uneasy feeling in the chest and show a rising temperature, there is a more rapid development of signs and symptoms. Pain becomes acute in the chest, the face assumes

a cyanotic tint, the respirations are accelerated, and the pulse is rapid and feeble. On examination the lower half of the chest on one side is found to be moving but slightly, if at all; its percussion note is dull, and the breath sounds over the dull area are at first weak, but later become intensely tubular with whispering pectoriloquy. The other side of the chest is distended and emphysematous: a condition which may make it somewhat difficult to prove the essential point in the diagnosis, namely, that the heart is displaced toward the area of dulness. This displacement of the cardiac impulse may amount to several inches, and by that the state of collapse is at once distinguished from pneumonia or pulmonary embolism. Hæmoptysis does not occur, but there is generally a muco-purulent expectoration.

The present paper is written to emphasise the clinical importance of Pasteur's massive collapse, to show that it may occur after spinal as well as after inhalation anæsthesia, and, lastly, to discuss the manner in which it is produced. Chiefly by the kindness of Sir Rickman Godlee, who drew our attention to several examples of this condition in patients under his care, we have seen in the last two years 11 cases. Undoubtedly many more have occurred during that time in University College Hospital, for we did not systematically examine every case of post-operative "pneumonia." All followed abdominal operations, either on the appendix, the gall-bladder, or for gastro-enterostomy, or hernia, and in all the operation had been surgically successful. Two examples may be quoted in detail.

CASE 1.—July 12th: Man, aged 31. Bassini operation for double inguinal hernia under chloroform with Vernon Harcourt inhaler. No preceding cough or expectoration. July 13th: Slight fever and bronchitis developed, the fever lasting eight days until the 21st. July 17th: Feeling well and appetite good. Between 8 and 9 P.M. he complained of a "drawing pain" over the xiphisternum, and at 11 P.M. of pain over the precordium. July 18th: At 2 A.M. the pain lessened, but he became dyspnœic and so cyanosed that oxygen was administered. The pulse rose from 88 to 144, and the respirations from 20 to 64; temperature 101° F. 10 A.M., still slightly cyanosed. Right chest immobile in its lower half, with dull percussion note and absent breath sounds over the lower lobe, where vocal resonance was also lost. Under X rays the heart was seen to be displaced to the right, so that its left border was at the left edge of the sternum. The right lower lobe of the lung was very dark, and the upper lobe was dull. On the left side the magnified shadow of the diaphragm on the screen moved three inches, but only half an inch on the right. Muco-purulent expectoration, ½ oz. in last 24 hours.

July 20th: Right side moving better. Left limit of cardiac dulness by percussion 2 inches to left of sternum. Sharply defined area of dulness over lower four spaces at right base behind, where the breath sounds were now intensely tubular and whispering pectoriloquy was heard exactly as in lung that is fully consolidated. No pain. Respiration 24, pulse 96, and temperature 100°. July 21st: Right side moving perfectly; breath sounds normal. X rays showed the heart to be in its normal position again, though the right side of the diaphragm was still a little restricted in its movement, and there was a little opacity in the right base of the lung above the liver.

The patient never complained of abdominal trouble or pain. The skin incision over the left hernia had gaped a little, but there was no infection.

Here the X ray examination proved definitely the extreme displacement of the heart and the immobility of the diaphragm. Pneumonic consolidation of the lung could not have cleared up so rapidly that tubular breath sounds should be replaced by normal breath sounds in 24 hours, and an opaque lung become translucent to X rays in three days. It is certain that the lung had collapsed, and the initial absence of breath sounds followed by their augmentation to a tubular character suggests that at first the bronchi also were closed. When the bronchi opened, the breath sounds naturally sounded tubular owing to their conduction through collapsed lung, while later they assumed the normal vesicular type as the alveoli became fully aerated.

CASE 2.—A healthy young man, 23 years of age, who was accustomed to play Rugby football, and therefore presumably had sound lungs, was admitted to hospital with all the features of an acute appendicitis of 36 hours' duration. Examination of the chest before operation found lessened movement at the right base, normal percussion note, but some weakness of the breath sounds; there were no adventitious sounds. The cardiac impulse was easily found in the normal position, 3½ inches from the mid line. Temperature 100° F., pulse 96, and respiration 24. Not X rayed.

Spinal anæsthesia, the exact height of which was not recorded, was produced by stovaine, and a gangrenous appendix was removed from the outer side of the cæcum. The abdominal wound was closed except for two tubes and a gauze plug. 36 hours later the temperature had risen to 100·2°, the pulse to 104, but the respirations remained at 24. Moist sounds were heard scattered over both lungs. Ten hours later the patient began to suffer from shortness of breath, and for about an hour his respirations numbered 40, with pulse 116 and temperature 102°. During this hour he suffered discomfort, but had no real pain or cyanosis.

In the morning the chest was examined. By percussion the left limit of cardiac dulness was only half an inch to the left of the sternum (verified by Sir Rickman Godlee), and the cardiac impulse could not be localised, though auscultation placed it to the right of the sternum. The right side of the chest was dull up to the fourth rib, while vocal resonance and breath sounds were both much weakened. The sputum was thick and muco-purulent. In four days the heart had returned to its normal position, and the signs had all vanished from the right lung. The abdominal wound drained well throughout, and the temperature became normal on the tenth day after the operation.

Since an X ray examination was not made, it remains uncertain whether the collapse was due to inhibition of the diaphragm or to paralysis of the intercostals by the stovaine; but it is not probable that the latter effect would have been produced on one side only. On theoretical grounds one might have expected that spinal anæsthesia, reaching up in all probability to the third or fourth intercostal space, would have blocked for some time the sensory impulses from the abdomen which are supposed to cause reflexly the inhibition of the diaphragm.

A feature common to these and all our other cases was the presence of muco-purulent expectoration, often in abundance and in three instances of a slightly offensive odour. This we regard not only as a point of diagnostic importance, since it is unlike the sputum of pneumonia, but also as good evidence of the nature of the changes within the lung that induced the collapse. The cause of such infective bronchitis after ether or chloroform inhalation may easily be conjectured, but it is odd that it should have developed also in the patient with spinal anæsthesia.

The Nature of the Change.

The teaching of the earlier pathologists established the belief that the alternating areas of collapse and emphysema in the lobe of a lung affected by bronchitis are caused by the bronchial plugs, which either act as ball valves, allowing the air to escape but not to enter the alveoli, or close the air way altogether so that the alveoli collapse as the air imprisoned within them is gradually absorbed by the blood. Such collapse is *passive*. Dr. Pasteur argued that his cases should be ascribed to an *active* collapse,

due to some deflating force, whether elastic or muscular, which compresses and empties the lungs *in the absence of any obstruction of the air way.* This hypothetical force comes into play when the ordinary inspiratory muscles cease to act and inflate the lung. It is quite distinct from the definite deflating forces of external pressure which lead to collapse with a pleural effusion or a subphrenic abscess. His suggestion was that the first step in the process is a reflex inhibition of the diaphragm, the muscle which is concerned especially with the aeration of the lower lobe of the lungs, and that this reflex is originated in most cases by irritation of afferent nerves from the peritoneum as the result of the operation. Next to this would follow an active deflation of the lung by some force, either muscular and external to the lung, or elastic, that is, internal. The air is supposed to be squeezed out of the whole mass of the lung instead of being slowly absorbed from each alveolus.

Certain facts limit the discussion of these probabilities. In the first place, there can be no doubt that the diaphragm is immobile, and that the failure of its action is associated with collapse of the lower lobe of the lung. The rhythmic movement is inhibited, but whether the muscle itself remains contracted or truly inhibited and relaxed is a question that is unanswered. For various reasons we were unable to examine more than one of our cases with the X rays during the acute attack, and so the position of the diaphragm in general was not ascertained. From the usual increase in tone of muscles in reflexes to deep-seated pain or inflammation, it would be natural to assume that the diaphragm would be fixed rigidly in slight contraction, only its rhythm and not the muscle tone inhibited. That is the condition around joints, or over local peritonitis, and probably, too, in the immobility of the intercostals caused by pleurisy. The point is of some importance, because complete inhibition of the dome of the diaphragm on one side would allow the abdominal pressure to tell directly upon the base of the lung and supply a slight deflating force.

Not only the condition of the muscle, but the source of the reflex is uncertain. As a rule the collapse occurs on the same side as the abdominal incision, so that it might be assumed to originate in the abdomen. Yet the condition is seen in cases where the patient has had no consciousness of abdominal pain. Moreover, rigidity or inhibition of the diaphragm is not a common reflex from pain in the abdomen. We have X rayed before operation several cases of appendicitis, simple, gangrenous, with local abscess, and with general peritonitis. In some of these the abdominal wall showed local rigidity, but in all the diaphragm was moving equally on both sides. An acute pleurisy does certainly lead to immobility of the diaphragm as well as of the chest wall, and the same result may be seen with deeper inflammations of the lung, such as gangrene or pneumonia. Further observations are therefore needed to determine whether the source of the reflex concerned in this post-operative collapse lies above or below the diaphragm.

The second point that is certain is the displacement of the heart to the affected side. This was clearly seen under the X rays. The lung was collapsed.

The various conditions which might conceivably expel or exhaust the air from the alveoli and induce collapse of the lungs are as follows:—A. By active compression, through—(i) pressure from outside the lungs; (ii) the elasticity of the alveolar wall; (iii) a hypothetical quasi-muscular contractile power of the alveolar wall. B. By absorption of the air, when the bronchioles are obstructed owing to—(i) inflammatory œdema and secretion; (ii) spasmodic contraction of the bronchiole muscles.

Now such an active deflating force as that of A (i) or A (ii) carries with it inevitably the deduction that the pressure about the lung must be higher on the affected than on the normal side. This is self-evident for A (i), and it is equally certain for A (ii). The elastic tissue of the alveolar wall is expanded by the pull of the negative intrathoracic pressure, and unless endowed with an active power like that of muscle it cannot squeeze the air out of the lung until it is freed from this external distending pull. Consequently, if either external muscular force or internal elasticity is to effect the collapse the intrapleural pressure must be raised from negative towards zero; and in that case the heart would be sucked away from the collapsed side into the contralateral area of greater negative pressure. Actually the displacement is in the opposite direction. Realising this difficulty, Dr. Pasteur suggested that the displacement may be more apparent than real, the left side of the heart being perhaps masked by acutely emphysematous lung and the right heart dilated by pulmonary obstruction. But our examination with the X ray proved the displacement to be very real and considerable. The condition must in consequence be one in which the lung collapse is associated with, though obviously not caused by, a tendency to an increase of the negative intrapleural pressure on the affected side; and this naturally explains the displacement of the heart and mediastinum and the acute distension of the contralateral lung. Compensatory emphysema of the opposite lung could not push the heart across into the area of collapse. The displacement must be the outcome of the increased negative pressure, which is caused by the reduction in volume of the collapsed lung and sucks both heart and contralateral lung across to the side of collapse.

The question is whether this can occur without local obstruction of the air passages. The only possible explanation left along these lines is that of A (iii), which supposes the alveolar wall to have active contractile power like that of muscle, and this assumption finds no ground for its support in the facts of present physiological knowledge.

We are therefore compelled to choose B as the greater probability. Local obstruction of the capillary bronchioles, either by muscular contraction or by blockage with secretion, would satisfy all the conditions named in the state of collapse. It has been shown in recent work on the nature of anaphylactic death in the guinea-pig that the bronchiole muscles are capable of such forcible closure that the animal dies in asphyxia. In man incomplete constriction of the bronchioles from various reflexes is probably responsible for the phenomena of asthma. So we may assume that the bronchiole muscles are strong enough to cut off the air entry to the alveoli. But it is most unlikely that they would be excited to such a reflex action locally and cause lobar collapse; nor would the condition be established without a preceding phase of asthma. Hence B (ii) may be set aside, and we are left with B (i) as the last explanation. In all our cases there was the possibility of such local obstruction, for every patient had

muco-purulent expectoration before or immediately after the onset of collapse. We regard this as the essential cause of the phenomena, because the tubes are more quickly blocked by secretion when they are deprived of the ventilating current from the diaphragm's action.

Experimentally, the process has been admirably illustrated by the observations of Lichtheim[4] in 1878, which are further discussed in Cohnheim's lectures on General Pathology (Vol. III.). Lichtheim obstructed a bronchus in rabbits by the introduction of a laminaria plug without opening the thorax. As the plug swelled the lung beyond collapsed; and the animals sometimes died from acute emphysema of the contralateral lung, which was so extreme as to prevent the circulation through it, or even to rupture and form a pneumothorax. Collapse did not occur when the blood-vessels to the lung were tied, and so it was clear that the alveoli were closed passively by absorption of their contained air into the circulating blood. The vacuum produced by the absorption of these gases sucks, to phrase it roughly, on the surrounding organs, causing the liver to rise, the heart to be dislocated, and the contralateral lung to become emphysematous. We think that this was the condition in each of the 11 cases of post-operative collapse that we have observed, for in all there were thick muco-purulent expectoration and fever preceding the symptoms of collapse. The immobility of the diaphragm allowed the secretion to block the smaller bronchioles—it would be too imaginative an inquiry to consider a possible inactivity of the ciliated epithelium—and then collapse ensued precisely as when the obstruction was caused by the laminaria plug. The consequent emphysema of the other side and the dislocation of the heart obstruct the pulmonary circulation, partly by kinking the great veins, partly by compression of the inter-alveolar capillaries. Cyanosis results and dyspnœa. The pain may arise from distension of the heart, or more probably from the strain upon the mediastinal tissues (cp. "drawing pain behind the xiphisternum").

Lichtheim's experiments are so complete that we did not desire to repeat them. Some observations were made by one of us to investigate the possibility of such an active collapse as Pasteur postulated in the absence of obstruction to the air way.

In a rabbit and a cat under ether the phrenic nerve was divided on one side in the neck. The animals were kept alive under ether for six hours, the movements of the diaphragm and the transparency of the lungs being observed by X rays before section of the nerve and subsequently. The diaphragm was fully paralysed, and it only showed slight oscillations as the result of the tug transmitted through the central tendon from the other side. No loss of transparency was seen in the lungs. Finally, the animals were killed by clamping the trachea and at once dividing the carotids. All the lobes of the lungs were found to be equally distended with air.

In two other experiments on cats a wider paralysis of the inspiratory muscles was caused by hemisection of the spinal cord at the second and third cervical segments respectively. Intercostals as well as the diaphragm on one side became immobile. Under X rays the chest looked smaller and slightly less translucent on the paralysed side. After intervals of two and three days respectively each animal was again etherised. The abdomen was opened and the paralysis of the diaphragm confirmed by inspection; the cat was then killed and the lungs examined as in the first experiment. No collapse had occurred.

This result makes an active deflation, as the result of simple paralysis of inspiratory muscles, and in the absence of obvious external pressure, seem to be improbable. And, indeed, the fact that the lungs are not found to be collapsed in ordinary post-mortem examinations points in the same way to the unlikelihood of the supposed deflating force. Surgeons have recently divided the phrenic nerve for the purpose of resting diseased lungs. So far as we can discover from the published papers[5] the resulting paralysis of the diaphragm does not cause collapse of the base of the lung when the disease is early and confined to the apex.

We therefore think that so far as our own cases are concerned the most satisfactory explanation is that which regards the collapse as being the result of an inflammatory obstruction of the smaller air tubes. It is true that objections can be raised to this on clinical grounds. Rhonchi and coarse râles are not often heard elsewhere in the chest, so that it is necessary to suppose that the inflammation is confined to the smallest tubes. The expectoration, though not aerated, is muco-purulent and thick, characters that suggest the infection which is confirmed by the microscopic examination. Since the condition develops rapidly, one may suppose that there is considerable œdema of the smaller bronchioles, though inflammation within the alveoli cannot be in any sense massive, because the collapsed lung is so much reduced in bulk. The collapse would be hastened by immobility of the diaphragm, but it should be remembered that such immobility has only been demonstrated after the collapse has occurred, and that it is not certain that the diaphragm is altogether inactive before this moment. Rapid collapse of a lung, when produced artificially by negative suction from its bronchus, has been proved by physiologists to induce a reflex setting of the diaphragm in a persistent inspiratory contraction, and it may be that such a thoracic reflex contributes to the final standstill.

It must be understood that the explanation we adopt applies only to those cases which we had the chance to observe. Dr. Pasteur described a cleaner type in which the onset was rapid, pyrexia succeeded the collapse and lasted only for 24 hours, while expectoration was practically absent. Perhaps this example may have been governed by another mechanism. Our cases all belonged to the group of infective bronchitis.

To recapitulate.—The 11 cases of post-operative collapse which we observed agreed closely with Pasteur's description. One feature he laid little stress on—and that we regard as critical. All had muco-purulent expectoration and fever, 101° to 103° F., preceding the collapse. There is no reason why fever should develop in a simple non-septic case with reflex inhibition and "active collapse." This fever, which makes the resemblance to pneumonia all the closer, is caused by a purulent bronchitis that is perhaps determined by a preceding infection of the air tubes. Together with this some unknown cause, either thoracic or abdominal, produces a reflex immobility of the diaphragm, and as the combined result of these two disorders of respiration the lower lobe of the lung undergoes passive collapse throughout its mass. This may occur at any time in the first week after the operation.

Since the volume of the collapsed lung is much reduced, movements occur to restore the balance of intrapleural pressures and the heart is displaced to the affected side, while the contralateral lung is overdistended. Pain and cyanosis develop when the displacement is rapid and extreme. At first

there are immobility, dulness of percussion note, and weakness of breath sounds on the collapsed side, whereas the other may be so hyperresonant as to resemble the state of pneumothorax. Later, as the bronchial air way opens up, the breath sounds become tubular with ægophony and whispering pectoriloquy. All the signs vanish in two or three days if the right diagnosis is made and active treatment adopted. Otherwise the collapse may persist, the infection spread through the lung, and pleurisy or true pneumonic consolidation develop as a complication. The chief criteria are fever, the greenish muco-purulent sputum, and the displacement of the heart. These together give the distinction from pneumonia or pulmonary embolism, the latter disaster being in the worst cases suggested by the acute onset of pain and cyanosis.

The aim of treatment is to open up the lung before infection spreads into its substance. Expectorants are given with potassium iodide; the patient is encouraged to make full inspiratory efforts, especially of an abdominal type, and if possible for five minutes every hour despite pain that may be felt from the abdominal stitches. If the abdomen has been tightly bandaged this impediment to breathing should be slackened. It is conceivable that the worst cases of cyanosis and pain might be relieved by an intrapleural injection of oxygen, in order to restore the balance of volume and push back the displaced heart and the over-distended lung. Fortunately, these urgent conditions are rare, and we have had no occasion to try this method since the possibility of such a line of treatment occurred to us.

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TUMOURS OF THE URINARY BLADDER.[1]

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I HAVE chosen this subject because I have found that not only may difficulty arise in the diagnosis of vesical tumours, but there is still a good deal of misconception as to the true nature of many of them. Recent surgical and pathological work has shown that in dealing with tumours in the bladder the difference between innocent and malignant growths is less defined than in other regions of the body, and rather than discuss the usual text-book descriptions I shall attempt to put forward some points which have helped me in my personal experience of these cases, of which I have now records of 58 under my own observation.

Etiology.

Of the etiology of tumours of the bladder practically little is known. It has been asserted that cystitis or some form of chronic irritation of the bladder may predispose to the formation of a tumour in the same way as it may on the tongue or elsewhere; certainly cystitis frequently accompanies a malignant vesical growth, but it is the ulceration of the latter that produces the cystitis. There is no doubt that the presence of bilharzial ova in the bladder is occasionally accompanied by a papillary growth; and it has been maintained by Wendel that workers in aniline dyes are often subjects of bladder tumours owing to some irritable product discharged in the urine. This cause can hardly hold good, as the vast majority of bladder growths commence just above and outside the ureteric orifices, whereas if the irritation of urine were the cause they should be placed where the urine would impinge—namely, just below and inside the ureteric orifice.

Classification.

Tumours of the bladder may be classified according to their histological characters into the following groups:—

1. Epithelial new growths:

Benign	... ...	Papilloma (villous). Adenoma.
Malignant	... ...	Villous carcinoma. Nodular carcinoma. Epithelioma.

2. Connective tissue new growth:

Benign	... ...	Fibroma. Myoma. Angioma.
Malignant	... ...	Sarcoma.

Of these tumours, the villous papilloma and the forms of carcinoma are of much greater frequency than the others, which may all be described as rare tumours. I have notes of one case of sarcoma and I remember seeing another operated upon when I was a student, but the others may be looked upon more as pathological curiosities and I shall content myself with a description of the papilloma and the carcinomata.

Villous Papilloma.

These tumours form distinct outgrowths from the vesical mucous membrane projecting into the cavity of the bladder and covered by fragile, villous processes. They may be single or multiple, and may be pedunculated or sessile. They are usually situated about the base of the bladder, above and outside the ureteric orifices or close to the internal urethral orifice. They vary in size considerably, but even when quite small may produce copious hæmaturia; in one case under my care I had great difficulty in finding a small villous tumour which I had seen with a cystoscope even when I had the bladder fully laid open.

The villous papilloma of the bladder has been hitherto regarded as an innocent benign tumour, but it has several characteristics in which it differs from other benign growths. The frequent multiplicity of these tumours, not only in the immediate vicinity of the original tumour but in areas of the bladder which may become opposed to the tumour as the viscus empties, shows a tendency to growth by direct implantation. There is a marked tendency to recurrence of the tumour after removal, either in the area of the original growth or about the previous cystotomy wound, which cannot be explained entirely by an incomplete removal of the primary tumour, but rather by a local implantation at the time of the operation or by some minute growths which had commenced but had not been discovered. I have seen a recurrence of a villous growth in the bladder after nine years, and in two other cases a recurrence occurred in the cystotomy scar in the fundus of the bladder, one after four years and the other after 18 months. I wish, however, to put particular stress upon another feature of these growths, and this is their marked tendency to assume definite malignant characters, not only in the original, but in the recurrent tumours. We have in our museum

[1] A post-graduate lecture delivered at the Cancer Hospital, Brompton, S.W., on Feb. 25th, 1914.

a remarkable specimen removed by the late Mr. Cecil Leaf of multiple papillomata of the rectum and pelvic colon in which two separate and quite distant tumours have undergone carcinomatous changes, and I suppose similar changes may take place in vesical papillomata. At all events, it is quite frequent for a villous papilloma to remain more or less quiescent for many months or years and then become malignant, or for a recurrent growth to be malignant when the primary operation has been for a pedunculated papilloma, and in which microscopic examination has shown no evidence of infiltration of the base of the tumour.

However, one must be careful not to fall into the error in mistaking the original tumour for a papilloma when it may have been malignant from the start, and this brings me to the point in the microscopic examination of these tumours—that is, always have the base of the growth examined for evidence of infiltration. In one case under my care I operated upon a patient who had been troubled with hæmaturia for five years at intervals, and first removed an enormous papilloma the size of a large tangerine orange attached by a small pedicle which showed no sign of malignancy on section. Eighteen months later he again had hæmaturia, and I found several small pedunculated growths on the lateral wall of the bladder which I extensively resected, but no sign of malignancy could be detected in any part of it. Nine months later he came to see me, when I found he had an obvious malignant growth infiltrating the cystotomy wound and the surrounding abdominal wall which grew rapidly. I have records of cases in which carcinoma was found in the bladder following operations for villous papilloma after intervals of 8, 4, and 1½ years, and two cases after 1 year, and another in which attacks of painless hæmaturia had been present for five years before any frequency of micturition commenced, and the growth was then found to be malignant. Thus there is good evidence that a villous tumour of the bladder shows a distinct tendency to become malignant, and cannot be looked upon as a wholly innocent tumour, a point which must influence us in our treatment and in our prognosis.

Symptoms.—The chief and often only symptom of villous papilloma is hæmaturia. This may occur suddenly without any traumatism or apparent cause, usually surprising the patient by its appearance, and is often profuse. It may last for one or two occasions of micturition or for a day or so, and usually stops as suddenly as it commenced, to recur after an interval of weeks or months in the same character. In a case under my care the patient had had attacks of hæmaturia at intervals of about three months for 16 years. Three separate and distinct papillomata were removed, and there has been no recurrence up to two and a half years. The blood is intimately mixed with the urine throughout micturition, or if only slight may be more marked in the last few drops of urine. Occasionally it may be so profuse as to clot in the bladder, when flat clots may be passed per urethram. The presence of clots in the bladder may give rise to a certain amount of vesical tenesmus, but apart from this pain is infrequent. In the intervals between the attacks the urine is normal, and it is one of the points of distinction between a papilloma and a carcinoma that in the latter cystitis occurs frequently, whereas it is uncommon in papilloma unless some instrumentation has caused it. There are a few other symptoms which may occasionally be present; there may be a sudden stoppage in the stream of urine during micturition, accompanied by penile pain, from the plugging of the internal urethral orifice by a piece of growth, or there may be aching in the loin due to increased intrarenal pressure from a slight obstruction to the ureteric orifice on that side. Occasionally the kidney may be definitely enlarged, and in one case under my care, in which an enlarged kidney was accompanied by attacks of profuse hæmaturia, I was asked to remove the kidney under the assumption that it contained a hypernephroma. I was able to prove by the cystoscope the presence of a villous papilloma covering the ureteric orifice, and after the removal of this tumour the renal swelling entirely subsided. I have seen this patient recently, and find he has a recurrence of the papilloma in the same position nine years after his operation, but the kidney remains of normal size.

Occasionally small pieces of epithelial tissue may be passed in the urine. These appear as pinkish, gelatinous fragments, showing a villous formation when floating in water. They are not common, although their presence is always suggestive of vesical tumour; but I would ask you to bear in mind that microscopic examination of the surface fragment will give no indication whatever whether it arises from a simple papilloma or from a villous carcinoma.

Diagnosis.—The recurrence of attacks of profuse, painless hæmaturia in a comparatively young patient is always suggestive of vesical papilloma, but it is necessary to diagnose it from other conditions. A renal papilloma or hypernephroma may produce profuse hæmaturia, and the former may cause fragments of papillomatous tissue to be voided in the urine; a renal papilloma is, however, very rare, and hypernephroma occurs, as a rule, after the age of 55 years. In either case worm-like clots from formation in the ureter may be present, whilst their passage usually gives rise to pain simulating renal colic.

Renal tuberculosis may exceptionally give rise to profuse hæmaturia, but will be distinguished by the increased frequency of micturition, pyuria, the frequent slight hæmaturia, and the palpation of a thickened ureter per rectum.

Vesical tuberculosis is almost always a descending infection from a renal focus and will be readily distinguished by the increased frequency of micturition, pain, and pyuria, whilst vesical calculus will be diagnosed from the increase in pain and frequency during movement.

By far the most ready means of diagnosis, however, remains with the cystoscope, for not only can the vesical lesion be determined with accuracy, but the character, size, exact position, and multiplicity of the growth be seen. I prefer to cystoscope these cases during an interval of freedom from bleeding, when the bladder can be more readily examined, but in some cases where the opportunity does not occur it must be done whilst hæmaturia is present. In these cases a medium clear enough to see through can usually be obtained by first washing out the bladder with silver nitrate 1 : 4000 or adrenalin 1 : 2000. In some cases of painless hæmaturia it may be an advantage to cystoscope during an attack of bleeding, for should the hæmorrhage be renal in origin this will be seen as well as the side from which it occurs.

A papilloma of the bladder appears as a rounded

tumour, covered by some translucent villous processes in which the central vessel may often be seen, varying from delicate, elongated, feathery processes which float about like those of a sea anemone and are stirred by the swirl of urine ejected from a ureteric orifice, to short, stunted, or mere rounded processes presenting a coarsely mammillated appearance These are usually situated about the base just outside the trigonal area, and may be attached by a delicate stalk or be sessile. They frequently hide the neighbouring ureteric orifice, and may be accompanied by smaller papillomata in the surrounding area. Occasionally the growth may attain such a size that the beak of the cystoscope passes into it so that no view can be obtained, as happened in two of my cases.

Treatment.—I have no doubt that in view of the tendency to recurrence and to become malignant, the ideal treatment of a villous papilloma of the bladder is to remove it by a complete resection, including the area of mucous membrane from which it grows. I am sure that the old-fashioned operation of opening the bladder and twisting the growth off its pedicle was not only incomplete, but was frequently followed by recurrence, whilst removal of the growth by a lithotrite or by an operating cystoscope is not radical for the same reason. The bladder after irrigation should be distended and opened in the mid-suprapubic line, and the base may be well displayed by packing a large gauze swab under a broad-bladed retractor at the upper angle of the wound. The use of the Trendelenburg position and of an electric head-lamp greatly facilitates the operation. The ureteric orifice near the tumour is identified, and if close to the pedicle it is often useful to pass a fine catheter into it as a guide. The tumour is then raised from the bladder and a small thread suture passed through the mucous membrane of the bladder on each side of the growth to mark the extent of removal necessary. Slight traction is made on these two sutures, as well as upon the tumour, and an incision carried around the base through the mucous membrane exposing the muscular layer of the bladder wall. After removal of the papilloma, together with a healthy area of mucous membrane, bleeding is arrested and the edges of the incision approximated with fine catgut sutures. In sessile growths exactly similar procedure is adopted, but in these cases a larger area of mucous membrane must be resected, and in one case I was obliged to resect the terminal three-quarters of an inch of the ureter and transplant it into the upper part of my vesical incision, owing to the implication of the orifice in the growth. In another case in which multiple papillomata recurred 18 months after the removal of a large villous tumour, I had to resect a large portion of the lateral wall of the bladder, and this case is of especial interest in that the specimen removed showed no signs of malignancy, but yet a year later the patient had a diffuse carcinomatous growth about the abdominal incision. During the operation the utmost care should be taken to prevent soiling of the operation area by the growth, and it is important to swab out thoroughly the area with saline or weak nitrate of silver solution with a view to prevent reinfection taking place. When all bleeding is stopped I sew up the bladder wound with fine catgut, leaving a small drainage-tube in the prevesical space, and drain the bladder by means of a catheter retained in the urethra.

In 13 cases of villous papilloma 11 were operated upon. One died from uræmia three days after the operation; 3 cannot be traced; 3 recurred, one after nine years, one after three years, and one in 15 months. The remaining 4 are free from recurrence after intervals of 7, 5, 4, and 2½ years.

In some cases of multiple growths studded over the vesical surface a radical operation is out of the question, and though these cases are probably malignant in origin an attempt may be made to slough off the exuberant growth by means of daily irrigations with increasing strength solutions of silver nitrate up to 1 : 500, as recommended by Herring, or by an open operation to remove the growths separately and to cauterise the base with a fine electric cautery point or nitrate of silver.

In cases in which a radical operation is not contemplated symptoms may arise which require treatment. Hæmorrhage may be severe, but is seldom enough to endanger life. In cases of hæmorrhage the patient should be kept in bed, and morphia given with calcium lactate in gr. xx. doses; if the bleeding is not arrested by these means a full-sized catheter should be passed and the bladder gently irrigated with hot saline solution (115° F.) or with hot solution of nitrate of silver (1 : 5000). In some cases a small quantity of silver nitrate (1 : 1000) or adrenalin (1 : 1000) may be run into the bladder and drawn off after a few minutes. Should clotting of blood have occurred in the bladder, the clots should be extracted by a large evacuating cannula attached to a rubber bulb as used after litholapaxy. If there is severe vesical tenesmus, it is probable that cystitis is superadded upon the tumour, and suitable treatment adopted. Suppositories of morphia and belladonna will relieve the pain or a suprapubic fistula may be made.

Carcinoma of the Bladder.

This is in my experience more than three times as common as papilloma (44 to 13). It occurs in different forms in which both the pathological and microscopic characters differ markedly. For purely clinical purposes they may be divided into a papillomatous or fungating group and an infiltrating sessile group. In the former group the tendency is for the growth to exuberate into the cavity of the bladder, forming large masses of soft, friable growth very similar in appearance to the papilloma, but in which the villous processes are more stunted or rounded and more irregular in shape, whilst the pedicle is thicker, firmer, and adherent to the submucous tissue. Microscopically the base shows that epithelial cells are invading the lymph spaces, and later may infiltrate the muscular wall of the bladder. In some cases the surface of the tumour may be devoid of villous processes, appearing as a raised nodule projecting into the bladder, with comparatively smooth surface which may be ulcerated in parts. The base of these growths shows marked infiltration with proliferating epithelial cells. In the infiltrating group of vesical carcinoma the growth presents the appearance of an ordinary epithelioma with a central depressed ulcer surrounded by heaped-up, friable nodules of growth and deeply infiltrating the deeper structures of the bladder wall. The two forms occur with about equal frequency (21 : 23).

As I have stated above, a carcinoma of the bladder may commence in an old-standing villous papilloma or in the recurrence of a papilloma, in which case it usually takes the form of a fungating growth, or it may arise without previous existing disease. It is certainly more common than papilloma, and I am inclined to think that many

cases which have in the past been looked upon as villous papillomata were in reality villous carcinomata. This may in part account for the early recurrent cases, and I look with extreme suspicion on any vesical papilloma which is covered with stunted villi or which has any but a very delicate pedicle. Even in the absence of any microscopic infiltration of the base by epithelial elements, I should look upon these tumours as malignant. Possibly I am inclined to look upon these cases as more commonly malignant owing to the number which are sent to this hospital in advanced stages of carcinoma which have been treated elsewhere.

Lines of spread of the disease.—Before we discuss the symptoms and course of carcinoma of the bladder let us for a moment consider the lines of spread of the disease. In the first place a malignant growth may spread in the bladder, small implantation growths arising in the vicinity of the primary tumour or in that part of the bladder wall which comes into contact with it when the bladder is emptied. There is also a distinct intramural spread, the growth infiltrating the muscular coats in the lymphatic spaces to a wider area than that occupied in the mucous layer. At the same time the growth penetrates through the vesical wall and may cause adhesions (and later direct infiltration into) to the rectum, vagina, or small intestine. In one remarkable case of a villous carcinoma in a young man the growth recurred very rapidly after removal, and the patient died in eight months. I made a post-mortem examination and found an enormous mass of growth extending from the bladder and directly invading the recti abdominis muscles; it extended laterally and directly infiltrated the pelvic bones, extending on the left side into the acetabulum, and on both sides bulging through the obturator foramina and invading the origins of the adductor muscles; on the left side it invaded the sacro-iliac joint and the gluteal muscles covering it. No other secondary deposits were found in the viscera or skeleton. This very rapid spread is most exceptional. Finally, the growth may spread by lymphatic extension following the trunks to the glands about both the internal and external iliac arteries, and in this situation may cause pressure upon nerves.

Symptoms.—The symptoms of vesical carcinoma vary somewhat with the character of the growth, and naturally with the extent of the infiltration. Hæmaturia is usually the first sign and may come on similarly to the papilloma as a profuse hæmorrhage, lasting a day or so and then recurring. With carcinoma the intervals between the hæmorrhages are less than in papilloma, and there is a much greater tendency to a more or less continuous slight hæmaturia. Another feature is that the blood is often more marked at the end of micturition, the last few drops of urine being more deeply stained than the earlier urine.

Increased frequency of micturition is another early symptom of carcinoma, coming on at first gradually, both during the day and the night, and increasing until it reaches as often as every quarter or half hour. Increased frequency is always more marked in the infiltrating than in the papillary carcinoma, and may occur whilst the urine remains clear, but is aggravated by the occurrence of cystitis.

Pain is usually present with carcinoma of the bladder. At first it is felt in the suprapubic area when desire to micturate becomes marked, and also in the perineum and terminal part of the penis when the bladder empties. It is also aggravated when cystitis is present, and may in some cases be due to obstruction of the internal urethral orifice by growth or by blood clot. There may be aching in the lumbar region, either from direct obstruction to the ureteric orifice from the growth or to ascending septic infection of the kidney. In later cases in which the pelvic glands have become affected by growth there may be pain along the course of the sciatic, crural, or obturator nerves from pressure.

The urine, apart from the presence of blood, may at first show little change, but as the growth progresses ulceration is produced, and the urine then contains pus, blood, and excess of mucus with the presence of cystitis. Later the urine becomes ammoniacal and foul, and may contain small conical-shaped masses of phosphatic material which has become loosened from the surface of the growth. Small masses of growth may also be passed in the urine, but too much stress must not be placed on the apparently benign appearance of these under the microscope as they are usually pieces from the surface of a fungating growth.

Diagnosis.—In cases commencing with hæmaturia difficulty may arise in the diagnosis. In speaking of the diagnosis of a villous papilloma, I pointed out the great advantage of a cystoscopic examination, which not only shows at once whether the bleeding is vesical or renal in origin, but will also demonstrate in the former the presence of a growth or some other lesion. Of these, tuberculous disease occurs in younger patients, is nearly always secondary to renal tuberculosis, so that distinct evidence is present in one ureteric orifice, the ureter may be felt to be thickened per rectum or per vaginam, and other evidence may be found of tuberculosis elsewhere in the body (prostate, testes, &c.). Bilharzia may cause hæmaturia and a sessile fungating mass in the bladder, but will be recognised by the presence of the characteristic ova in the urine, but the great difficulty may arise in the diagnosis between a simple villous papilloma and a villous carcinoma. In cases in which the tumours show on cystoscopic examination long, delicate, feathery processes springing from a small pedicle, the growth is probably innocent, but when the villi are stunted and rounded, the pedicle short and broad, and the immediate area of the attachment of the pedicle shows elevation or thickening of the vesical mucous membrane, or the surface of the tumour shows a fleshy mammillated appearance, then suspicion should at once be aroused of a malignant tumour. In some cases, owing to the hæmorrhage or to the size of the tumour, a cystoscopic examination may be unsatisfactory and our diagnosis must rest upon the clinical evidence, and I would say at once that the presence of increased frequency of micturition or of pain following micturition is strong evidence of malignancy. Cystitis, apart from any instrumental infection, is very uncommon in benign tumours, but frequent with carcinoma. A further important piece of evidence may be obtained from a careful rectal examination; with villous papilloma nothing abnormal will be felt unless the growth is large, and then only a soft mass in the bladder on bimanual examination; but in malignant disease an increased resistance may often be felt in the bladder base on one side of the middle line, whilst a thickening may often be detected extending outwards towards the pelvic wall from the upper and outer part of the prostate due to extension in the lymphatic system.

In other cases in which hæmaturia is slight, but

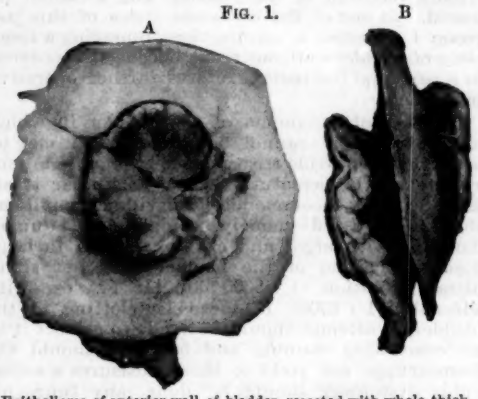
in which increased frequency of micturition and pain are the predominant features, the diagnosis must be made from vesical calculus, from prostatic enlargement, and from cystitis. In calculus the pain is more marked at the termination of micturition, and in the absence of marked cystitis the increased frequency of micturition only occurs in the daytime, and is increased by movement. In prostatic enlargement the onset is more gradual and hæmaturia is less common. Pain may be marked in prostatic carcinoma, but in each case a rectal examination will determine the presence of a prostatic tumour. I have had recently two cases under my care which caused some trouble in diagnosis. In the first, a stout gentleman, aged 71, had had increased frequency of micturition for three years together with some difficulty in micturition. Three months before he had had hæmaturia, which had recurred at the time I was asked to see him. I found that he had 9 ounces of residual urine in the bladder, and I was unable to get a satisfactory view with a cystoscope owing to bleeding from the prostatic urethra in passing the instrument. Per rectum there was a very large, soft, adenomatous prostate, for which I recommended removal. On opening the bladder a few days later for this purpose I was surprised to find, in addition to the enlarged prostate, a hard infiltrating epithelioma of the right lateral wall of the bladder, ulcerated at the upper end and too extensive to remove. In the second case a cystoscopic examination demonstrated a nodular, ulcerated growth on the right of the bladder base, but on rectal examination the prostate was found to be slightly enlarged, very hard, nodular, and fixed, extending as a broad infiltration into the bladder base and towards the right pelvic wall. In this case I think the growth was primarily in the prostate with direct spread to the bladder.

In the infiltrating growths the cystoscope shows an ulcerated area surrounded by irregularly placed, raised nodules of growth, and per rectum a hard plaque may be felt in the bladder base.

Treatment.—The treatment of carcinoma of the bladder depends upon the local condition present, the amount of apparent extension of the growth, and the physical condition of the patient. If the growth is small and, as far as can be ascertained, is confined to the bladder, and the patient's condition enough to warrant a severe operation, an attempt at complete removal should be made. These conditions are but rarely fulfilled, as the cases are so often seen when extravesical spread has already occurred that any attempt at radical removal is unjustifiable. Should, however, an attempt be made to remove the growth the bladder should be opened above the pubes and the area surveyed. When the exact condition has been determined, a small bougie should be passed into the ureter if the growth approximates the latter, and the vesical incision extended into the peritoneal cavity and the intestines packed off by flat swabs, the high Trendelenburg position helping in this. The steps of the resection depend upon the position of the growth, but in all cases the bladder wall must be removed wide of the base of the tumour. If the ureteric orifice is placed within the area required to be resected I have no hesitation in removing it. The incision should be deepened on either aspect of the ureter and the latter identified in the extravesical tissues and separated. After the whole growth and surrounding area of bladder wall have been separated the ureter is divided and the proximal end brought up and sutured into the upper angle of the deep vesical incision by three sutures of fine catgut before the wound is approximated. I have had occasion to remove the terminal portion of the ureter in six cases, once for epithelioma, four times in villous carcinoma, and once in papilloma, and only in one of these cases has there been any aching in the loin following it. I never completely close the suprapubic wound after the removal of a malignant growth, but prefer to drain the bladder for some 10 to 12 days by a rubber drainage-tube.

In some cases of multiple malignant tumours radical resection cannot be performed, but the condition may be considerably alleviated by the local removal of each fungating growth and the cauterisation of the pedicle. For some cases complete removal of the bladder after implantation of the ureters into the rectum or vagina or after bilateral nephrostomy has been recommended, but

FIG. 1.



Epithelioma of anterior wall of bladder, resected with whole thickness of bladder wall. A, Surface view. B, Lateral view showing raised epithelium with subjacent muscular and peritoneal layers.

I have no experience of it, and the statistics of recorded cases are by no means encouraging. In my own cases, in which 23 were epitheliomatous, I operated upon seven, but in only two was I able to complete a resection. In one case of an apical epithelioma (Fig. 1) there was no recurrence in the bladder, but recurrence took place in the pelvic and

FIG. 2.

Epithelioma of base of bladder, resected with terminal end of ureter, latter transplanted. A rod is passed into ureteric orifice.

lumbar glands in 18 months, accompanied by nerve-pressure symptoms, and the patient eventually died. In the other (Fig. 2), in which I removed the growth with the terminal portion of the ureter, recurrence occurred in the pelvic glands in 20

months, soon followed by metastatic deposits in the liver, death ensuing in 28 months after the operation.

In the villous carcinoma the prognosis is more hopeful. In my series of 21 cases, 5 were too extensive for any operation owing to the extent of the extravesical infiltration, but in 6 I performed a palliative operation to remove the exuberant masses of growth in the bladder either for hæmorrhage or for obstruction. In each of these recurrence took place rapidly. In the remaining 10 cases I resected the growths widely in the absence of any apparent extravesical spread of the disease, and in 4 was obliged to resect a part of the terminal portion of the ureter. Of these 4, 2 are alive and well after 4 years and 2½ years, but the two others recurred after 1 year and 1½ years with glandular deposits. In the remaining six cases, 2 are alive and well, 1 after 4 years and 1 after 1 year; 2 rapidly recurred in the bladder, and 2 cannot be traced. In one of the recurrent cases of this last group I operated a second time, removing a large piece of bladder wall, but recurrence again occurred in a year, and the patient refuses further operative treatment.

In cases of carcinoma of the bladder in which radical treatment cannot be carried out, it may be necessary to provide treatment for the more urgent symptoms. If hæmaturia is severe similar treatment to that recommended in villous papilloma should be tried—namely, complete rest under morphia, with ergot and calcium lactate in large doses; irrigation of the bladder with hot silver nitrate solution 1 : 5000 at 115° F., or with adrenalin 1 : 2000. If there be clotting in the bladder an attempt should be made to extract it by an evacuating cannula and bag, and should the hæmorrhage not yield to these measures a suprapubic cystotomy should be done, any fungating growth removed, and the base treated with the cautery.

Pain and increased frequency of micturition may become very distressing in vesical carcinoma, and often in part are caused by accompanying cystitis. Sandalwood oil and urinary disinfectants should be given, and the bladder irrigated with hydrogen peroxide (one volume) or weak nitrate of silver solution; suppositories of belladonna and morphia or a small enema containing tinct. opii ♏ xx. may relieve it. In several cases under my care I have opened the bladder above the pubes, removed any fungating growth, and provided a permanent suprapubic fistula with great relief to the unfortunate patient.

Finally, I have tried the effect of placing a tube containing 50 mgrm. of radium into the bladder for periods of from 12 to 24 hours, but I cannot say that I have found any relief from pain from its use nor any diminution in the size of the growth. The bladder is often so intolerant that the presence of the tube causes pain, but I think further trial should be given to radium in these cases so that experience may be gained in the proper dosage, &c. We must not expect radium to do all the wonders in cancer that the lay press would have us believe, especially where the malignant process has spread beyond the bounds of its original focus, but in a few cases of carcinoma in other regions I have undoubtedly seen good results from it, and so shall persevere with it when the opportunity arises and when radical operative measures are contraindicated.

Wimpole-street, W.

DEATH FROM HYPERACUTE STREPTOCOCCAL INFECTION (STREPTICÆMIA)

FOLLOWING RADICAL REMOVAL OF CERVICAL TUBERCULOUS GLANDS WITH SINUSES.

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THE two cases which I report below are of sufficient interest to have attention drawn to them. They present a possibility of which I had been unaware—namely, death within a few hours of radical removal of tuberculous glands. Moreover, I have been unable to find any reference to such an occurrence in the literature, and though I have since heard of such cases in conversation they were regarded as very mysterious and the true import of them had not been appreciated. I regret that only the second case was adequately inquired into after the warning given by the first case, but the clinical details corresponded so closely in both that one cannot but believe that they were both victims of the same disaster.

CASE 1.—The patient was a male aged 1 year and 10 months. He was a very big boy for his age, fat and chubby, but a little rickety. There was a family history of consumption on the father's side. Six and a half weeks before admission to the Victoria Hospital for Children, Chelsea, lumps appeared on the left side of his neck in the occipital region. These went down of their own accord. One week previously a lump had appeared in the upper cervical region of the same side. This lump became red and inflamed owing, his mother said, to a knock received in bed. On admission there was a red fluctuating gland adherent to the skin in the left upper cervical region. There were one or two large glands deep to it. On Oct. 21st, 1912, the gland was incised, but was found to contain nothing but soft, grey, tuberculous-looking material without caseation. It was scraped out and this gland was found to lead into a deep one, which was similarly treated. The wound refused to heal, and protuberant pale granulations sprouted from it. After nearly a month of trying to accelerate healing a radical operation was decided upon. This I performed on Nov. 18th. The old scar was excised, and a complete removal of the enlarged glands on the left side of the neck was carried out. They were very adherent to the sterno-mastoid (which had to be divided) and also to the carotid sheath. A mass of glands extending from the clavicle to the angle of the jaw was removed. The wound was closed with a continuous suture and a drain inserted through a separate puncture hole in the skin flap. All went well until 1 A.M. the following day. The child had seemed very well considering the severity of the operation. His pulse, however, suddenly rose to 160 and became full and bounding. His temperature rose from 98° to 102° F., and the face became flushed and blue. The patient was now unconscious. There was no hæmorrhage from the wound, which was opened up and washed out. Saline was administered and stimulants and heat supplied, but he died two hours later—12 hours after operation. He vomited only once, shortly before death. The urine was free from acetone or diacetic acid.

CASE 2.—The patient was a female aged 3 years and 8 months. There was a family history of pulmonary phthisis on the father's side. A lump appeared on the right side of the neck 18 months previously when the child was in South America. This swelling was allowed to burst; it discharged pus for some time after. There had been a small sinus over the gland ever since with a slight discharge which during the last three weeks had been worse. On admission the patient was found to have a typical tuberculous sinus leading down to a deep gland, with which was associated considerable peri-adenitis. On Jan. 16th, 1913, I performed a radical operation for removal of the glands on

the right side of the neck. A long incision was carried along the anterior border of the sterno-mastoid in the usual manner, commencing below and behind the mastoid above and ending immediately above the clavicle. The incision encircled the sinus in such a manner that this was removed *en bloc* with the glands. Care was taken to remove the chain of small glands along the outer aspect of the jugular vein. The wound was closed and a drain inserted as in Case 1. The child seemed very well on the evening of the operation, but about 4 o'clock the next morning she woke up with a scream and had a rigor. Her pulse was found to be 160 and her temperature 106° F. She was unconscious and lay muttering to herself. She was a little restless at first, with twitchings of her limbs. She presented signs of an acute toxæmia with her high temperature, rapid bounding pulse, flushed rather cyanosed face, and unconsciousness. There was no acetone or diacetic acid in the urine, and no vomiting. She was kept warm by means of a 16-candle power lamp in the bed in the manner employed as a routine at the Victoria Hospital. Strychnine and digitalin were administered as the heart flagged, and finally an intravenous injection of sodium bicarbonate was given in deference to the opinion of one who believed the condition to be an acidosis. The patient died at 12 noon—20 hours after the operation.

The cause of death.—Unfortunately no post-mortem examination was permitted in either case, but in the second I obtained a specimen of the heart's blood by puncture soon after death. A swab was also taken from the wound, and these two were sent to the Lister Institute for bacteriological examination. They reported the presence in the blood and on the swab of "a short-chained streptococcus, presumably the same family in both instances." There can be little doubt that the cause of death in this second case was a hyperacute invasion by streptococci, and I am equally convinced, from the similarity of the clinical pictures, that this was the cause of death in the first case also. There were none of the classical signs—vomiting, extreme restlessness, and acetonuria—of a delayed chloroform poisoning, though this drug was used as the anæsthetic in both cases. The suddenness of the onset rather favoured embolism, and in the absence of a post-mortem examination this cannot be absolutely negatived. However, the pyrexia, the full bounding pulse, and the flushed, rather cyanosed, face were indicative of a severe blood infection rather than a massive infarct. Further, the wounds were thoroughly opened up during life, and there was seen to be no sign of thrombosis in the jugular vein.

Origin of the infection.—It is extremely improbable that the streptococcus was extraneously carried into the wound through imperfect operative technique. I think that this source can be ruled out at the outset. It is almost certain, however, that the operation lighted up a smouldering infection. In this connexion it will be remembered that sinuses were present in both these cases. In the first case this followed aseptic incision and curettage and had been antiseptically treated in the wards till the time of the second operation. Nevertheless there had been an inflammation in the gland, non-pyogenic, and therefore very likely a mild or thwarted streptococcus infection. The sinus in Case 2 had been present for some 18 months, and had had household treatment only for some time previously. It is highly probable that organisms were already lurking in the sinus, and probably in the gland tissue and lymphatics also. The manipulation necessary for the removal of the glands would very likely cause a spilling of infective material into what is really a very large open wound. Absorption would very readily take place directly into the blood or *viâ* the deep lymphatics and thoracic duct (Thiele[1]).

Dr. A. Stanley Griffith, of the Field Laboratories, Cambridge, to whom the glands of Case 2 were submitted as material for his research upon the varieties of tubercle bacilli found in cervical glands, did not find any streptococci in the glands themselves. But as he said in a letter: "I am afraid my investigation, confined as it is to the purely tuberculous tissue, will not be of much help to you in deciding whether the streptococcus infection started before or after the operation." However, his examination of the glands from this case is so interesting that I cannot do better than quote his notes at length.

> The material consisted of a group of glands and several separate ones. The group was attached to a diamond-shaped piece of skin, in the centre of which was a sinus. The latter was found to end in dense fibrous tissue which was apparently the remains of a tuberculous gland, the contents of which had been evacuated. Below this fibrous patch were two enlarged glands which contained dry caseo-calcareous masses which readily shelled out from a fibrous capsule; a third small gland contained a caseo-calcareous tubercle. The other (separate) glands appeared slightly enlarged, but were not obviously tuberculous. An emulsion was made of the caseo-calcareous substance and inoculated into guinea-pigs. Cultures were also sown with the caseo-calcareous substance, but these have so far remained sterile; no streptococci have grown. I found no organisms of any sort in a smear preparation of the emulsion. ..... Two guinea-pigs were inoculated with an emulsion from two glands and neither of them developed tuberculosis. All the cultures sown with the emulsion remained sterile. There were therefore no streptococci or living tubercle bacilli in the material investigated.

Hence we see that the caseous material at least was found sterile. Whether the sinus would have been found sterile or not is another matter. And the same is true of the organised material removed—the capsules of the glands, the fibrous tissue, and lymphatics. In these cases with sinuses there is probably a fairly rich bacterial flora in the sinus walls and in the numberless lymphatics which are necessarily cut across at operation.

Other cases.—In looking through the records of the Victoria Hospital, Chelsea, for the past 25 years I found but four deaths in 533 operations on tuberculous glands, a mortality of 0·75 per cent. The four deaths were these:—

1. Died eight days after from tuberculous meningitis.
2. Tuberculous abscess with sinus; curettage; death from erysipelas.
3. The notes state that after liberating pus "breaking-down gland tissue extending in all directions ..... was with difficulty and violence scraped away, a large ragged cavity finally remaining." The child died the following evening with a temperature of 107·8° F.
4. At operation hæmorrhage was severe; wound opened and packed after four dressings. Frequent coffee-ground vomiting; pain in abdomen. Diacetic acid in the urine. Temperature rose to 105·2°. Child died just over 24 hours after operation (typical delayed chloroform poisoning; excluded in my cases).

These four cases represent practically the only four possibilities of death following operation on cervical glands. Presumably Cases 2 and 3 are both deaths from acute streptococcal infection, but of a grosser and more obvious nature than the two cases I have reported above. The medical profession has been wont to regard the operation of removal of tuberculous cervical glands as safe if tedious.

Prophylaxis.—The lesson to be learned from the

[1] F. H. Thiele: Channels of Spread of Bacterial Infection, Royal Society of Medicine, 1914 (Thiele and Embleton).

above rather bitter experiences is that careful attention must be paid to sinuses for a few days before operation. They should be well swabbed out daily with iodine or carbolic alcohol. It would be well in most cases to obtain a culture from the sinus before determining the date of operation. As for treatment, once the bacteriæmia has set in probably no remedial measures will be of avail. The wounds were opened and flushed out with saline in both cases without success. In these hyperacute infections little can be expected from anything but intravenous anti-serum, and little enough from that. The body weight of these victims is so small that a comparatively small dose of streptococci will be lethal.

Finally, a note on the operation itself. It is now customary to remove all the glands of the affected side of the neck in a manner only slightly less thorough than if they were malignant. There can be no doubt but that this is the ideal method of treatment (Müller[2]), as by this means not only the obviously affected glands but also those which are in the incipient stage are thoroughly removed. Close attention should be paid to the small glands on the outer side of the carotid sheath, as these are very liable to become affected and spread the trouble into the posterior triangle. Indeed, Judd[3] plans his incision entirely in the posterior triangle so as to remove the "Fettpolster" of Merkel, and goes on to strip the deep cervical chain from behind.

Summary and conclusion.—1. The radical removal of tuberculous glands in the neck, whilst the only rational procedure, is not unfraught with danger. 2. This is especially the case in the presence of a sinus. 3. Two cases operated upon by me died from a fulminating streptococcal infection, one 12 hours, the other 20 hours after operation. 4. The exact source of infection was not discovered, but was probably the walls of the sinuses present. 5. Prophylactic treatment should be carried out for a few days before operation—the sinuses should be well swabbed out with iodine or similar antiseptic. 6. The wound should be well washed out with saline before it is closed and drainage employed, preferably through a separate stab wound in the skin flap. 7. In children at least probably no treatment will avail when once the bacteriæmia is established.

I desire to express my indebtedness to Mr. Joseph Cunning, whose house surgeon at Tite-street I was, and who very kindly allowed me to operate upon and report these two cases. I am also indebted to Dr. Griffith for the excellent report he so courteously furnished me with.

Victoria, British Columbia.

[2] G. P. Müller: Treatment of Tuberculous Cervical Lymphadenitis, Annals of Surgery, 1913.
[3] Starr Judd: Collected papers of Mayo Clinic, 1910–11.

CAMBRIDGE RESEARCH HOSPITAL.—The studies which are being carried on at the Cambridge Research Hospital in connexion with rheumatoid arthritis and allied diseases have reached a stage at which it is essential that those working at the hospital should be provided with a properly equipped operating theatre, in order that more advanced research may be undertaken into the cause and treatment of these diseases. As there is no room suitable in the present building it will be necessary to build, and Mr. Otto Beit has generously promised the sum of £700 for the erection of this building, and has further promised the sum of £100 per annum for the next ten years towards the general maintenance of the hospital.

CONGENITAL ICTERUS.[1]

BY SPENCER SHEILL, F.R.C.P. IREL.,
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IN his "Lectures on Diseases of Children" Dr. R. Hutchison aptly states that "so soon as the child is born it meets with various adverse influences which may render it the subject of disease before it has hardly begun to live." Had he said, "So soon as the seed is sown, or earlier than this, adverse influences are frequently active in harm for the future generation," he would have been equally correct and his words would have carried a greater significance. In the subject under consideration—congenital icterus—post-natal influences are of small moment, for the factors which are working to produce the abnormalities observed in such cases exert their principal energy during intra-uterine life, and they may even be hereditary.

Let me first very briefly compare the various forms of icterus neonatorum so that there will be no misconception as to the particular form to which I wish to draw the attention of the section. The simple jaundice so often met with occurring during the first week of life is really better called pseudo-jaundice. It is generally believed by the best observers to be due to inability of the liver to discharge sufficiently rapidly *vid* the bile the products of red-cell disintegration. This red-cell destruction is, as you are aware, a normal process in the new-born, the child born with 5½ or 6 million red corpuscles per c.mm. and 110 per cent. of hæmoglobin having normally at about the end of the second week but the usual 5 million cells of the adult. It is believed that the débris so created renders the bile unduly viscid; that the bile capillaries become over-filled, and reabsorption follows stagnation of bile with consequent jaundice. In this form the conjunctiva is not injected, and the stools are not clay coloured. The trouble is transient and always benign. The blood origin of the affection has set some observers carefully comparing the effect upon the infant, as regards jaundice, of early and late ligature of the umbilical cord, with the result that a larger percentage of infants were found jaundiced when the cord was ligated late, thereby permitting more placental blood to reach the child.

The form of jaundice in which the conjunctiva is deeply injected, the stools colourless, the urine loaded with bile-pigment, and the child unduly drowsy, is said by some to be due to similar causes as the pseudo form, but in more marked degree; by others to be due to patency of the ductus venosus with lowered tension in the portal circulation and increased tension in the bile capillaries: but whatever its origin it seldom progresses to convulsions, coma, and death.

I need say little about the septic form of jaundice due to cord infection—its pathology is well known and its prevention simple. Syphilitic disease is usually recognisable by other signs and symptoms, and if liver degeneration is not too far advanced appropriate treatment is effective.

There remain, then, two forms of icterus—excluding Winckel's disease and Buhl's disease—to be discussed: namely, congenital abnormalities of the bile passages and familial jaundice. In the former there may be a defective development of the

[1] A paper read before the Obstetrical Section of the Royal Academy of Medicine in Ireland on April 3rd, 1914.

cystic or hepatic ducts early in intra-uterine life, creating a sluggish discharge of bile and followed by irritation of the ducts, then catarrh, and finally obliteration. The process is slow and may be completed during intra-uterine life, or not until a few weeks or months after birth. One can say with some certainty whether obliteration has occurred early or late by observing the meconium voided, which is normal if the obstruction has taken place late in intra-uterine life or after birth.

The treatment of this form of jaundice is, of course, early operation, but there is always the difficulty of recognising the obstruction sufficiently early to ensure a good result, for the signs and symptoms are so similar to those of simple or pseudo-jaundice that the affection may have progressed beyond the possibility of recovery ere the obstruction be suspected, and one cannot always palpate with certainty a dilated gall-bladder. Moreover, the obstruction is not always amenable to operation as the process may have spread deeply through the liver itself. The family history of these cases helps us but little, and it is the same with the familial or hereditary form of jaundice—a rare form, the pathology of which is far from being clearly understood.

In looking through the scanty literature on the subject one finds the following points standing prominent: 1. The parents are usually healthy, and syphilis is not an important factor. 2. A tendency for several children of the same family to be similarly affected. 3. Other children of a family in which a fatal case of jaundice has occurred have been affected with infantile jaundice, or were unduly subject to digestive disturbances. 4. Boys were more frequently affected than girls.

In familial jaundice there is a tendency to spontaneous hæmorrhages from the umbilicus, bowels, or nose. The hæmorrhages are alleged to be due to the effect upon the blood-vessels of ptomaines circulating in the blood in quantity, following upon derangement of liver function, but they may be due also to an anæmic condition sometimes found in these cases. But whatever be their cause they are of ill omen, the little patient usually dying in coma or convulsions. Treatment would appear to be useless, and seeing our ignorance of the pathology this is not to be wondered at. A case of this nature recently came under my care, and the following brief sketch of it may be of interest.

The mother was hardly what one would call perfectly healthy, for she suffered from time to time from what she called "liver attacks." Appendicitis, gall-stones, and liver chills were prominent amongst the names of her ailments as diagnosed by various medical men. There can be no doubt, however, that she suffered from aggravated constipation for years, and as cause or effect her colon was chronically much dilated. She came to me first, when pregnant about five months, with a history of losing two infants shortly after birth from jaundice. Questioning her husband or herself elicited no information of any value. She had several "liver attacks" during this pregnancy, and she was very "nervy" at times, and prone to faintness when in a warm atmosphere, such as the kitchen. Her heart was sound, and the urine contained no abnormality at any time while under observation. Epigastric pain was a fairly frequent and annoying symptom.

After an easy normal labour, at the end of which a little chloroform was administered, I delivered her of an apparently perfectly normal male child. The infant showed a faint icteric tinge in the skin at birth, and this became rapidly deeper and deeper to the end. The child was very cross and fretful, and cried feebly most of the time. After 48 hours, as the little patient appeared to be going the way of its predecessors, I asked for a consultation with a surgeon, as a result of which he operated on the infant immediately in order to relieve what was diagnosed as obstruction to the outlet of bile. On opening the abdomen the gall-bladder was found moderately distended with very viscid bile. The ducts were patent, but the lumen could hardly admit of the passage of so thick a fluid as the bile found in the gall-bladder. The gall-bladder was drained, but the infant died about nine hours later. No post-mortem examination was permitted, but the weight of evidence indicated that we were dealing with a case of "familial jaundice," that the disease was antenatal, and that the abnormality lay in the bile itself rather than in the bile passages.

Naturally, in view of these facts, one is bound to ask, What is the cause of this unduly viscid bile? And if that question is answered by saying, what I believe to be the case, that it is due to a hereditary tendency to hæmolysis more precocious and more marked than is normal, then we must go further and seek a cause for the advanced hæmolysis. Some of these cases show a profound anæmia with a large percentage of megaloblasts. My case was anæmic, but not to a marked degree.

In spite of the fact that John Thomson, Summons, and others have found the parents mostly healthy in these cases, I feel unwilling to dissociate the fact of the mother's tendency to "liver attacks" in my case from the fatal icterus of the infants. One such case can prove nothing, but other observers have suggested that "familial icterus" is due to a poison circulating in the maternal blood, and the point is undoubtedly well worth investigating.

My special regret regarding this case is the incompleteness of my observations upon it and the inability to examine the cadaver. May I suggest that in the blood, and in the organs associated with the making and purifying of the blood, of both mother and infant much hidden information may lurk, and that we should in all suspicious cases thoroughly, *and above all early*, make a complete microscopic investigation of the blood.

Dublin.

THE RÔLE OF THE CRUCIAL LIGAMENTS IN HÆMARTHRUS AND INJURIES TO THE KNEE.[1]

BY EDRED M. CORNER, M.C. CANTAB., F.R.C.S. ENG.,
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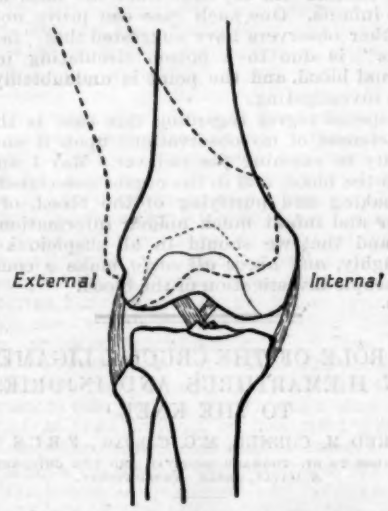
I PARTICULARLY wish to demonstrate the case of this young man. He injured his knee some four weeks ago whilst playing football, and has come to the hospital now for advice, as the injured knee is slow to get well. The pain, tenderness, and source of disability are placed without hesitation on the inner side of the knee. The rest of the knee is apparently normal and without pain. Thus at a glance the diagnosis is clear: partial rupture of the internal lateral ligament of the knee—partial only and not complete, as the knee does not allow of the leg being abducted at that joint. At the site of the lesion the outlines of the internal condyle of the femur and the tuberosity of the tibia are obscured by a tender swelling—extravasated blood around the ruptured fibres of the ligament. On asking the patient if the knee swelled up after the injury, he answered "Yes," but to no great extent and within a short time of the accident, an hour or two.

[1] Portions of an address to the Surbiton and Croydon Branches of the British Medical Association.

As the swelling of the joint took place so soon after the accident there can be no doubt that the fluid within the swollen joint was in large part blood. Where can this blood have come from?

The internal lateral ligament was only partially torn, and the synovial membrane of the joint is loosely attached there. Hence the synovial membrane would not have been torn with the ligament. Was the synovial membrane torn by the movement of the internal semilunar cartilage? The extreme localisation of the pain to the side of the joint says "No" to this. Had any movement of the cartilage marked enough to tear the synovial membrane taken place, pain would have been felt more anteriorly, to the front and side of the joint, and the swelling of the joint after the accident would have been greater. Where, then, did the blood come from? And why was so easily torn a structure as the internal lateral ligament only partially ruptured? The true reason is that the tearing of the lateral ligament was stopped as the strain began to be taken up by the strong crucial ligaments inside the joint. These latter ligaments withstood the strain, and the internal lateral ligament was only partially and not completely ruptured. (See figure.) Indeed, complete rupture



The illustration shows the knee-joint, its two lateral ligaments, and the crucial ligaments. The dotted outline represents the femur when the joint is bent inward, and serves to show how the crucial ligaments take up the strain as the fibres of the internal lateral ligament yield.

of the internal lateral ligament of the knee is impossible without a complete rupture of the crucial ligaments, or at least a complete rupture of the anterior crucial ligament.

Hence in lateral strains, sprains, or stresses of the knee it can be formulated:—1. Partial rupture of the internal lateral ligament is produced by the crucial ligaments withstanding the strain of the accident and preventing complete rupture. The results of treatment will be satisfactory. 2. Complete or severe lacerations of the internal lateral ligament will always be accompanied by a lesion of the crucial ligaments, even to the complete rupture of the anterior crucial ligament. The results of treatment vary *pari passu* with the extent of the laceration of the crucial ligaments. The convalescence may be long and the final result unsatisfactory.

I have spent so much time upon the injury to the crucial ligaments to demonstrate and insist on their almost universal presence in cases of injury to the knee. So that a further statement may be made. The synovial membrane of the knee is tightly bound down to these crucial ligaments, so that when the ligaments bear strain and are stretched the synovial membrane on them is torn, not in one place, but as many small tears. These tears are the main source of blood in the joint after an injury—cases of hæmarthrus. Hence it is found with regard to the patient under consideration—where the crucial ligaments withstood the strain and were not broken, and where the synovial membrane would be but little torn—there was but little early swelling of the joint after the accident. Little blood was poured into the joint as the synovial membrane was little torn. How different this clinical picture is from that of the man who, as was proved by operation, ruptured his anterior crucial ligament. That man's joint swelled up enormously and quickly after the accident. Also the tenderness on the inner side of his knee extended so far forward that a lesion of his internal semilunar cartilage was suspected, the unoffending cartilage being removed at Malta. He is an example of the extremely unsatisfactory result of treating the ruptured internal lateral ligament and excluding all treatment for the coexisting injury to the crucial ligaments—a fact noted by Mr. A. M. Martin, of Newcastle-on-Tyne.[2]

Such reasoning as the above explains the relationship to each other and to injuries of the knee of partial rupture of the internal lateral ligament, complete rupture of the same ligament, partial or complete rupture of the crucial ligaments, and the source of blood in the knee-joint after injury (hæmarthrus). These have many consequences, but the one at present worthy of notice is that very little reference has been made in these clinical observations of injuries to semilunar cartilages. These cartilages move and bear stress in all movements of the joint. But operation, and probably removal of the semilunar cartilage, is not a "cure-all" for troublesome conditions found in knees which have sustained injuries. The popularity of this operation suggests that such may be the opinion, and that this operation is done with as small amount of forethought as is so often given to the operations for the removal of an appendix, varicocele, or hernia sac. The post-operative benefit in these cases is often due to some post-operative stiffness giving the joint an appearance and feeling of strength.

Clinically there is a lesson to be learned. If the early post-traumatic swelling of a joint is slight and symmetrical, there is little intra-articular injury and the patient will do well. If the early post-traumatic swelling of the joint is rapid and great, there is an important intra-articular injury (or injuries) to be found in the neighbourhood of the crucial ligaments. The convalescence of such a case will be long, and the end results of any treatment short of operative treatment unsatisfactory.

It may be asked how such an operation should be

[2] Brit. Med. Jour., Oct. 25th, 1913.

done. The answer is, through a median arthrotomy, splitting the patella longitudinally, the knee being flexed to expose the structures at the back of the joint. There is no need to wire the patella after this operation; the split rectus femoris and ligamentum patellæ are sutured.

And what is the time to operate? As soon as the post-traumatic bleeding has ceased and before any post-traumatic inflammation has begun—that is to say, if circumstances allow, operate a few hours after the injury. Professor Murphy, of Chicago, likes to wait a few days after the injury. During this period he injects some formalin solution into the joint which "coffer-dams" the subsynovial lymphatics and so prevents any infection spreading from the joint.

Harley-street, W.

A CASE OF CARCINOMA OF THE BREAST IN A MALE.

BY H. V. WELCH, M.B., B.S. LOND.,
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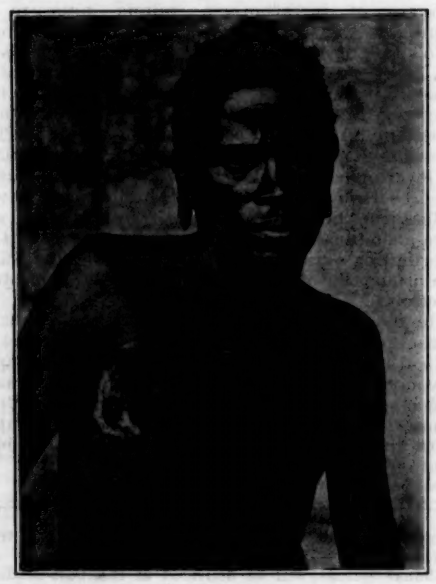
THE appended reproductions of photographs of a case of carcinoma of the breast in a male may prove of interest to readers of THE LANCET.

The patient, a Kikuyu, aged 42, first came up to the native hospital at Nairobi, complaining of the pain caused by the growth. The surface of the tumour was very foul and ulcerated. (Fig. 1.) The

FIG. 1.



Reproduction of photograph of patient showing growth before removal.

axillary and supraclavicular glands were hard and enlarged. The patient dated the history back only two months, but I imagine that that was when pain was first troublesome.

Operation was recommended to ease the pain rather than in hope of cure. Owing to the extent of the growth it was only possible to remove the tumour as widely as possible, and not attempt to clear the axilla. On section the growth showed the typical appearance of adeno-carcinoma. (Figs. 2 and 3.)

FIG. 2.

Microscopical appearance of growth under low power.

FIG. 3.

Microscopical appearance, high power.

Quite apart from the infrequency of breast cancer in a male, malignant disease amongst the natives in this country is extraordinarily rare.

I am indebted to Dr. J. H. H. Pirie for the sections, and to Mr. Crichton for the photographs.

A NOTE ON THE ASPIRATORY FUNCTION OF THE HEART.

BY H. WALTER VERDON, F.R.C.S. ENG.

THE heart is a pump and, like the mechanical pump, possesses aspiratory and propulsive powers—aspiratory power to draw supplies from pulmonary and systemic veins, and propulsive power to discharge the contents of its ventricles into pulmonary and systemic arteries. The heart works in a minus-pressure environment which at the height of inspiration registers 30 to 50 mm. Hg and during expiration falls to half this measure. Since fluids flow in the direction of the least resistance a centripetal current of blood from pulmonary and systemic sources sets in towards the minus-pressure environment of the heart, filling the great tributary veins, the auricles, and the ventricles. Intrathoracic minus pressure thus constitutes a potential aspiratory force which keeps the central venous system perpetually full of blood, and maintains this section of the circulation under favourable conditions for the action of the kinetic aspiratory function of the ventricles.

The kinetic aspiratory function is intermittent and exercises itself only during systole. When the cone of the heart contracts and expels the contents of the ventricles into pulmonary and systemic arteries it vacates a section of the pericardial sac, a space which is instantly filled by the head of the venous column entering and expanding the auricles—the advance movement being rendered imperative by the *vis a tergo* of atmospheric pressure exercised upon the contents of pulmonary and systemic veins lying at the foot of the venous column. The impetus of the moving column of venous blood transmitted to the cone of the heart is felt upon the thoracic wall; hence the quality of the apex beat affords a fair indication of the efficiency of the aspiratory function, a term which denotes and includes both the potential and the kinetic forces of aspiration.

The aspiratory function may be lowered by asthenic states of the myocardium or by reduction of the minus pressure of the environment. The latter event occurs when the fibrous stroma of the lungs loses its elasticity, when the musculature of the diaphragm and the thoracic wall becomes atonic, when intrapleural and intrapericardial effusions accumulate, and when pressure from the abdomen reduces the capacity of the thoracic cavity.

When aspiratory function is lowered certain phenomena occur. *Vis a tergo* of atmospheric pressure loses its potency, and intrathoracic venous circulation languishes. Diastole of the right ventricle and that of the auricles is sluggish, and the current in pulmonary capillary circulation is slow. Congestion of the pulmonary stream and stasis in bronchiolar radicles display themselves in symptomatic expression by asthma and dyspnœa. High peripheral resistance in the pulmonary field leads to high tension in the right ventricle, which, unable to discharge its contents fully, becomes the receptacle of a residual accumulation of blood. The barrel chest of emphysema is the result of attempts made by inspiratory musculature to neutralise the untoward effects of minus-pressure insufficiency.

Contrast circulatory conditions prevailing in states of low intrathoracic minus pressure, as in emphysema, with those obtaining in the incipient stages of fibroid phthisis, when minus pressure is high, owing to contraction occurring in the fibrous stroma of the lungs. In the latter instance the heart is small. Asthma and pulmonary congestion are almost unknown, and the freshness of the complexion as compared with the greyness of the skin of the emphysemic is a matter of note. The falling in of the chest wall at later stages points to the existence of excessive degrees of minus pressure. This condition is also apparent in the well-defined deflexions of the jugular curve, which contrasts sharply with the featureless appearances of the jugular curve of the emphysemic.

In the recumbent posture, when the shoulders are depressed, the diaphragm seeks a high horizontal plane of activity; intrathoracic minus pressure is correspondingly reduced and aspiratory function is lowered. Hence this posture is intolerable to the subject possessed of a weak aspiratory function. When the trunk is upright the liver, attached by its suspensory ligament to the aponeurosis of the diaphragm, seeks a lower situation in the abdominal cavity, drawing down with it the diaphragm, which now engages itself upon a deeper plane of action. For this reason the subject of a weak aspiratory function even during the hours of sleep assumes an upright pose. When the aspiratory function is excessively low the patient stands up, resting and fixing his arms and bent shoulders over some object of support. He thus secures a depending liver, and at the same time obtains a *point d'appui* from which inspiratory muscles attached to the thoracic wall may exercise themselves with effect. By this means the fullest measure of intrathoracic minus pressure is secured.

To speak of the limitation of the movements of the heart through the direct effects of abdominal pressure is incorrect. The heart is suspended in a bony cage, and the arching of the diaphragm is limited by unyielding aponeurotic structures. Thus when the diaphragm has attained its highest plane of elevation ample room remains for the heart to disport itself without let or hindrance. Nevertheless the heart is affected by intragastric and intra-abdominal hyper-pressure—the one condition determining sympathetic acceleration or vagal inhibition, the other inefficiency of the aspiratory function.

The object of this paper is to draw the attention of the practitioner of medicine to a subject of clinical importance, and one having a bearing upon treatment—a subject which has suffered strange neglect at the hands of the cardiologist. Upon turning over the pages of several recent works upon heart disease I have not found so far even bare mention of the subject.

Streatham-hill, S.W.

LECTURES ON MEDICAL HYDROLOGY.—A course of lectures on Medical Hydrology (Hydrotherapy and Medicinal Springs) will be delivered at the Post-Graduate Medical College and Polyclinic, Chenies-street, London, W.C., on May 11th, 12th, 13th, and 14th, at 5.15 P.M., by Dr. R. Fortescue Fox. The lectures will deal with the effects of heat and cold, the principles of hydrotherapy and its application to acute and chronic disease; the rationale of bathing procedures—cooling, sedative, thermal, and hyperthermal—employed both at home and at medical baths; medicinal springs and baths, and the choice of health resorts; and indications for hydrological treatment. All medical practitioners interested in hydrology are invited to attend

Medical Societies.

ROYAL SOCIETY OF MEDICINE.

SECTION OF MEDICINE.

Observations on CO_2 in Alveolar Air of Diabetics.—Aplastic Anæmia.—Multiple Superficial Ulceration of the Stomach.—A Pedunculated Intrabronchial Tumour (Sarcoma) causing Bronchiectasis.

A MEETING of this section was held on April 28th, Dr. SAMUEL WEST, the President, being in the chair.

Dr. E. P. POULTON read a paper on Observations on CO_2 in the Alveolar Air of Diabetics, especially in relation to the onset of Coma, and demonstrated Fridericia's method of measuring it clinically. He said that Beddard, Pembrey, and Spriggs were the first to draw attention to the fact that the partial pressure of CO_2 in the alveolar air of diabetics fell with increasing acidosis to reach a very low point in coma. When low the alveolar CO_2 could be raised by the administration of sodium bicarbonate. Straub and Fridericia had both confirmed their results. In the present communication stress was laid on the importance of measuring the alveolar CO_2 as a guide to treatment and prognosis in diabetes. The advantage of using this method was that the results gave a measure of the actual acidosis—i.e., of the amount of β-oxybutyric and diacetic acids present in the arterial blood at the moment. A clinical apparatus devised by Fridericia had been used for these determinations, and gave satisfactory results for clinical purposes. The method only took about ten minutes to accomplish. The normal values in healthy individuals for the alveolar CO_2 usually lay between 5 and 6 per cent. The same values were obtained in mild diabetes, where the acidosis was at a minimum. However, values down to 4 per cent. indicated that the patient was perfectly secure against the onset of coma for the time being. Values between 3 and 4 per cent. indicated the presence of danger, and it was important to take measures to raise the value if possible above 4 per cent. In none of the cases examined had coma supervened in less than two days after a reading of between 3 and 4 per cent. had been obtained. There was thus plenty of warning. Values of from 2 to 2·5 per cent. indicated the rapid onset of coma, probably within 24 hours, unless immediate improvement occurred. The values obtained actually during coma varied from 0·8 to 1·5 per cent. These values could, of course, only be measured by special methods—i.e., Pembrey's or Hasselbalch's modifications of the Haldane-Priestley method. The clinical method was inapplicable. Detailed charts of the values of nine cases of diabetic coma were shown and of six milder cases of diabetes.

Dr. F. PARKES WEBER read a paper on a case of Acute Aplastic Anæmia, with a Note on the Nomenclature of Plastic and Aplastic Anæmias. He said that the chief points of the case might be summed up as follows. A young man, who had previously enjoyed apparently fair health, though he had (as the necropsy showed) formerly had a slight tuberculous affection of the apices of the lungs, suddenly contracted some kind of microbic infection of the mouth, showing itself by gingival stomatitis, a phlegmonous induration of the right cheek, and considerable pyrexia. From all this he completely recovered, but with the onset of the mouth disease there was associated a grave form of anæmia, which proved rapidly progressive, and in spite of the improvement in his mouth condition ended fatally in ten weeks from the apparent onset. This anæmia differed from typical so-called "pernicious anæmia" and from grave secondary anæmias in its being much more pernicious and much more rapidly fatal. Blood examinations showed the almost complete absence of any "megaloblastic reaction" and of the blood-regenerative changes, generally so much dreaded as a characteristic sign of the presence of pernicious or of grave secondary anæmias. In the present case poikilocytosis, anisocytosis, and polychromatophilia were absent or only slightly marked, even when the total number of erythrocytes fell to below 1,000,000 in the cubic millimetre of blood. There was never decided megalocytosis, and still less was there any megaloblastic reaction such as is characteristic in pernicious anæmia; in fact, there were few megalocytes, and nucleated red cells (erythroblasts) were almost completely absent. The colour index of the red cells varied greatly (from about ½ to 1), but it was usually much lower than 1 instead of being higher than 1, as it would probably often be in characteristic cases of pernicious anæmia. Simultaneously with the fall in the red cells there was likewise a great reduction in the number of the white cells (leucopenia), which were only about 2000 instead of the normal 5000–8000 in the cubic millimetre of blood. Of the white cells the lymphocytes were least affected, and all the differential counts of white cells showed a decided relative lymphocytosis; but this was only relative, for the total lymphocytes numbered only 814–1550 in the cubic millimetre of blood, instead of the normal average—namely, about 1400–2000. The white cells particularly reduced in number were those derived from the bone-marrow, notably the polymorphonuclear neutrophiles, which at one count numbered about 1000, instead of the normal 4000–6000, in the cubic millimetre of blood. The quantity of blood platelets was decidedly diminished below the normal standard. The clot which forms in the watery blood from cases like the present one was said by French observers not to retract normally, but this was not tested in the present case. The main features of the disease were accounted for as those of an anæmia due to blood destruction, almost entirely unaccompanied by conservative blood-regenerative changes on the part of the hæmopoietic tissue of the bone-marrow. The condition might therefore justly be termed, as it was termed, "acute aplastic anæmia." Genuine examples of acute aplastic anæmia were probably invariably rapidly fatal like the present one, but conditions of chronic aplastic anæmia, characterised by a variable chronic anæmia with deficient signs of blood regeneration, likewise existed, which belonged to a different category. One suggestion was that cases of acute aplastic anæmia were due to the initial infection being of a peculiar nature, the resulting toxins in the blood having the power more or less completely to paralyse or destroy the hæmopoietic functions of the bone-marrow. But the initial infection need apparently not always be a severe one, and it could obviously be argued that the severity and peculiar fatal character of acute aplastic anæmia were due to some preceding, though possibly hitherto latent, peculiarity of the affected person—a peculiarity manifesting itself by the inability of his hæmopoietic bone-marrow to react efficiently in response to even moderately urgent demands on it. Be that as it might, whether the condition was due to some exceedingly virulent septic infection or to some unknown and rare infection (which had the power of paralysing or destroying the hæmopoietic functions of the infected individual), or due to an idiosyncrasy or a temporary or chronic peculiarity (deficiency in hæmopoietic response) on the part of the affected individuals, the clinical features of a case of "acute aplastic anæmia" were sufficiently striking to give it a place by itself amongst the rarest diseases or symptom-complexes of the blood and blood-forming apparatus. This rapidly fatal kind of "aplastic anæmia" might well be termed "aplastikæmia."[1] On the other hand, the chronic form of aplastic anæmia to which he had already alluded might be called "hypoplastikæmia," since it was really a chronic hypoplastic anæmia, due to congenital or acquired inability of the hæmopoietic tissues (under normal or slightly pathological conditions) to maintain the normal standard of blood quality (blood equilibrium); in other words, the hæmopoietic tissues in such chronic cases gave a deficient regenerative response to normal and pathological stimuli. Other anæmic cases of various kinds showing the ordinary characteristics of blood regeneration (cases of "plastic" anæmia as opposed to "aplastic" or "hypoplastic anæmia") could, of course, be divided into groups which might by the same method of nomenclature be headed "orthoplastikæmia" and "metaplastikæmia." These conditions of "aplastikæmia," "hypoplastikæmia," &c., might furthermore be contrasted to a state of what might be termed temporary or permanent "hyperplastikæmia," including cases of erythræmia (polycythæmia rubra) and some cases of erythrocytosis (secondary polycythæmia rubra), in which the hæmopoietic response of the bone-marrow to normal and pathological stimuli was excessive.

Dr. WEBER also described a case of Multiple Acute Ulceration of the Stomach. The patient, aged 47 years, was

[1] The spelling should of course really be "aplastichæmia," but it is the custom to write "leukæmia" instead of "leuchæmia."

admitted to the German Hospital in February, 1914, in a very feeble, cyanosed, and dyspnœic state, not unconscious, but with her sensorium somewhat dulled. The history was that for 20 years she had been subject to winter cough and bronchitis, and that she had been more or less constantly ailing for the past two years. In June, 1913, she had been knocked down in the road by a cyclist. The present illness was said to have commenced with bronchitic symptoms about two weeks before admission. No special gastric symptoms had been noted, and there was no history of hæmatemesis, epistaxis, hæmoptysis, or melæna. In the hospital sharp crepitations were heard over the upper front part of the right lung. The other organs of the thorax and abdomen showed nothing remarkable. There was some œdema of the feet. The urine was scanty and contained a trace of albumin; no sugar. The respirations varied between 44 and 60 per minute, and the pulse between 112 and 130. The body temperature was never above 99° F. and never below 97°. In spite of treatment (oxygen inhalation, digalen, diuretin, ipecacuanha, subcutaneous injection of camphor oil) the patient died about 42 hours after admission. At the necropsy the upper part of the right lung was found to be in a condition of "tense œdema." There was some fresh pleuritic adhesion on the right side, with about 300 c.c. of clear serous pleuritic effusion. Microscopical sections of the affected part of the lung showed catarrhal and extreme emphysematous changes, and the presence of coagulated œdema fluid in the pulmonary vesicles made the sections appear under the microscope as if they had been cut in celloidin. No Gram-positive organisms were found. The right side of the heart was somewhat engorged. The spleen was of average size, and of hard rather than soft consistence. In the liver there was a transverse groove across the lower part of the front, such as is caused by "tight-lacing," and microscopically there was evidence of chronic passive congestion. In the remaining organs nothing specially noteworthy was observed excepting in the stomach. There was no ascites, and from the outer side (before it was opened) the stomach did not appear to be diseased. On opening it the mucous membrane was seen to be hyperæmic and thrown into longitudinal folds or "rugæ" by the contracted state of the muscular walls of the organ. There were no submucous or subserous hæmorrhages (nor was there any pus such as may be found in cases of "phlegmonous" gastritis). The unexpected feature was the presence of a great number of sharply cut ("punched-out") ulcers in the mucous membrane. At least 100 of these ulcers were counted, but there had probably been considerably more, as some of them appeared to have been formed by the coalescence of two or more smaller ones. They were distributed over all parts of the gastric mucosa, but were chiefly arranged in longitudinal lines on the projecting ridges or folds (rugæ). Some of them formed uneven slit-like depressions of considerable length on the convexity of these ridges. Some of the longer (linear) ulcers were possibly formed by the coalescence of smaller ones, but their slit-like appearance was, doubtless, in part due to the state of circular contraction of the muscular walls of the stomach. In the first part of the duodenum there was some hyperæmia but no ulceration. Microscopical examination of two of the ulcers in the stomach showed that they were superficial, the deepest part of the gastric mucosa remaining undestroyed and forming the ulcer floor. The mucous membrane, especially the ulcerated region, was moderately infiltrated with lymphocytes and polymorphonuclear cells, proving the ante-mortem nature of the change. The ulcers were, however, doubtless acute, as no signs of chronic inflammation were observable. No Gram positive organisms were found in the sections. There could be no doubt that the multiple acute superficial ulcers were in the present case of recent formation. They constituted, in fact, practically a "terminal" phenomenon, and probably both they and the local pulmonary œdema were due to the same infective agent (whatever the microbe in question might have been). Dr. Charles Bolton in his recent work on "Ulcer of the Stomach" had referred to two cases of multiple acute gastric ulceration of infective origin. In the stomach of one of these patients 431 ulcers, or lesions about to become ulcers, were found, whilst in the other patient's stomach there were about 250. Dr. Weber was indebted to his house physician, Dr. Sons, for much help in the examination of the present case, and to Mr. S. G. Shattock for kindly assisting in the microscopical examination.

Dr. J. A. BRAXTON HICKS described a case of Pedunculated Intrabronchial Tumour (Sarcoma) causing Bronchiectasis. His paper will be published in full in an early issue of THE LANCET.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

Introductory Address.—Prognosis in Incipient Opacities of Lens.—Pigment in Iris of Child.—Flat Sarcoma of Choroid.—Microphthalmia.—Papillædema in Disseminated Sclerosis.—Dressings and Antiseptic Methods in Ocular Operations.—Treatment of Dislocated Lens.—Post-operative Complications of Cataract Extractions.—Optic Neuritis and Spinal Myelitis.—Irido-sclerotomy in Glaucoma.—Diseases of the Eye in Animals.—Senile Cataract with Two Nuclei.—Death following Open Evisceration.—Exhibition of Cases, &c.

THE annual congress of the Ophthalmological Society was held at the rooms of the Royal Society of Medicine, Wimpole-street, on Thursday, Friday, and Saturday, April 23rd–25th, while a clinical meeting was held at the Central London Ophthalmic Hospital, Judd-street, W.C., on Friday afternoon. The chair was occupied by Mr. F. RICHARDSON CROSS, the President, and among the distinguished visitors were Professor Uhthoff, of Breslau, Professor Straub, of Amsterdam, and Professor Landolt, of Paris.

The PRESIDENT, in the course of a short introductory address, reminded members of the distinguished work of his predecessors in the chair—Bowman, Hutchinson, Hulke, Hughlings Jackson, Argyll Robertson, Berry, Sir Henry Swanzy, David Little, Priestley Smith, Nettleship, Tweedy, and Lawford—and expressed congratulation on behalf of the society to the Royal Society of Medicine on the success achieved by the Section of Ophthalmology. He referred to his investigations on the question of factory lighting, undertaken at the request of the Royal College of Surgeons of England, and thanked members for the help they had given him on the subject. Most of the replies, however, from members who practised in industrial localities showed that there were few ailments which could be attributed to the insufficient or bad lighting of factories; but the inquiry did not include such special work as glass making, or working on red hot or white hot conditions of metal, testing arc lamps, &c. Any injury done by excessive artificial lighting seemed to be attributable to the ultra-violet rays, as in the case of snow blindness; but the wearing of any glasses largely protected the eyes from the ultra-violet rays. The negative results of this inquiry did not lessen the necessity for aiming at a perfect form of lighting, which was an economic question, concerning not only the best results of work, but the hygiene of vision. There still remained much to be learnt as to the causation and treatment of eye diseases. All kinds of abnormal conditions of blood and system generally might set up inflammation of the intraocular blood-vessels, such as iritis, uveitis, episcleritis, retinitis, &c. He referred to the suggestion of Mr. Basil Hughes that instead of rheumatic iritis the term "metastatic iritis" should be used. It was very necessary to determine the etiological cause of the condition seen, for then measures could be taken to increase the patient's resistance to the particular organism, and of course any focus of disease must be energetically treated. He proceeded to speak of the selection shown by certain bacteria for particular localities, and said there was reason to believe that bacteria flourishing in their own particular locality might produce different strains showing a selection for other tissues. The view that there were evolutionary developments of bacteria seemed well justified. He also referred to the value of diphtheria antitoxin and the various hormones in ophthalmic work, as also the serum therapy which was so well initiated by Sir Almroth Wright. He spoke of the gonococcus being the most widespread cause of infectious diseases, and pointed out that the organism might remain latent in the body for years. He referred to the work of Carl Browning showing the close relationship between syphilis and interstitial keratitis, and primary optic atrophy, general paralysis of

the insane, and locomotor ataxy, while half of the cases of iritis and one-fourth of the cases of choroiditis were shown to be syphilitic. The good effects of salvarsan and neosalvarsan in eye disease, he said, were very marked. Dealing with the history of the Ophthalmological Society, the President reminded members that in 1880 a committee was appointed to consider defects of sight in relation to public safety, with authority to communicate thereupon with the Government on the part of the society if thought fit. In the following year an international committee, 14 nations being represented, was appointed "to deliberate concerning the tests of vision and colour sense most applicable to persons employed in working or observing signals by land or sea when the lives of others are involved." In the second volume of the society's Transactions appeared the resolutions arrived at, indicating how unsatisfactory the matter was at that time. If the advice tendered 30 years ago had been taken advantage of many disasters would have been prevented. The society also took an important step in 1884 in connexion with the prevention of blindness from ophthalmia neonatorum, and a special committee appointed brought forward certain resolutions, which were adopted. But the Local Government Board, Whitehall, declined to act on the suggestion that printed instructions as to the dangers should be handed to each person registering a birth, and despite several attempts it has not yet been possible to bring this about, notwithstanding the large number of cases of blindness due to this cause. But quite recently discretion was given to town councils and county councils to make the disease notifiable if they thought fit, and now ophthalmia in infants had become notifiable. It was, said the President, terrible to reflect on the number of people whose sight might have been saved if adequate measures had been taken so long ago.

Mr. W. H. H. JESSOP read a paper entitled "The Prognosis in Incipient Opacities of the Lens."—Sir ANDERSON CRITCHETT expressed his agreement with Mr. Jessop's remarks, and related the case of a clergyman, aged 48, who, when he consulted a young oculist, was told he had cataract, and so nervous was he in consequence that he insisted on presenting himself for examination every few months, fearing that he would be losing his sight. But his sight continued good, except for a slowly progressing presbyopia, until he was 86.—Professor LANDOLT agreed that cases such as those described by Mr. Jessop were often met with, and he thought the term "cataract" should be restricted to cases in which there was serious impairment of vision which finally required removal of the lens.—Mr. J. B. STORY (Dublin) also expressed agreement, and suggested that the term "cataract" should not be used when, in the opinion of the observer, the condition was not progressive.—Mr. LESLIE J. PATON described cases similar to those related by Mr. Jessop, and Dr. G. F. ALEXANDER thought that the fine spicules often seen in the eyes of young people were congenital and had persisted throughout life.—Mr. S. JOHNSON TAYLOR (Norwich) also described such a case in which he was able to prevent a fruitless operation for a condition which was not progressive or detrimental to the sight.—Dr. GEORGE MACKAY (Edinburgh), Mr. JOHN ROWAN (Glasgow), and Mr. C. WRAY (Croydon) also discussed the paper, and Mr. JESSOP replied.

Mr. N. BISHOP HARMAN read a paper entitled "The Appearance of Pigment in the Iris of the Child." The observations were made on white children, the offspring of a blue-eyed, fair-haired father and a brown-eyed, dark-haired mother. At birth in each case the irides were of the usual dull slaty-blue colour, and the iris tissues were obscured as though coated in some smooth fine-textured material. Clearing of the iris stroma was noted from the third to the sixth week of life. Two children developed blue eyes, one blue with the suggestion of violet, due to rims of finer darker stroma at the margins. The other blue became bright and cold in tint owing to a marked thickening of the stroma in the intermediate zone. Two children developed brown irides. The first sign of brown pigment was noted at the sixth week. The pigment was in broad irregular patches extending from the basal margin; it looked just as though the iris had been touched with brown ink which was soaking through to the surface and towards the pupillary border. The development was earliest in the temporal half of the iris. The patches extended and fused until the whole was brown. The tint became full and pure in one child; in the other there remained at the age of 2 years some suggestion of bluish or greenish tint at the depth of the crypts of the iris. In none of these cases was there any of the fine scattered pigment that is so common a feature of the hazel and dirty blue irides, and which forms an irregular ring about the pupillary margin. From a few observations it was thought that this surface pigment spread from the pupillary margin at a later date, and from a secondary pigmentation.

Dr. GORDON M. HOLMES and Mr. R. A. GREEVES communicated a paper on Flat Sarcoma of the Choroid, with Multiple Metastases. It was a case in which the trouble commenced with external rectus palsy, and later there was severe pain in the right forehead, and examination revealed considerable sensory loss in the distribution of the first division of the right trigeminal nerve. Still later there was complete loss of tactile sensibility, and partial palsy of all external muscles innervated by the right oculo-motor nerve. The pupils, however, continued to react well to light, but he subsequently developed marked optic neuritis. Death occurred 5½ years after the commencement of the symptoms. —Mr. LESLIE PATON discussed the case.

Mr. R. A. GREEVES read a paper on Two Cases of Microphthalmia, and Mr. LESLIE PATON a paper on Papillœdema in Disseminated Sclerosis. In 100 cases Mr. Paton had met with five which showed evidence of past neuritis. In one case 18 months after the optic neuritis had been present in one eye there were normal fundi without atrophy and with normal visual fields, vision being 6/9 in one eye and 6/6 in the other. He related a number of cases supporting his thesis.

Lieutenant-Colonel R. H. ELLIOT, I.M.S., read a communication on Dressings and Antiseptic Methods in Ocular Operations. The paper was concerned with attention to minute details to ensure scrupulous cleanliness in operations, and incidentally the author criticised some thoughtless procedures which he had seen in certain clinics. Referring to the recommendation of Lieutenant-Colonel H. Herbert, I.M.S. (retired), for irrigation of the conjunctiva with 1 in 3000 perchloride, he said that since 1907 he (the speaker) had not had one case of post-operative panophthalmitis. —Professor LANDOLT, in discussing the paper, expressed the opinion that boiling cutting instruments spoilt the cutting edge, an important matter seeing that a clean-cut wound was very much more satisfactory than one which was not made with a very sharp instrument. He therefore used and recommended dry heat—viz., up to 150° F.—keeping the instrument in that for 20 minutes. He believed he had never had a case of infection from instruments. His practice was, when using atropine, to use a fresh ampulla each time. He objected to an irrigator.—Mr. JESSOP referred to the danger of using long indiarubber tubes in connexion with operations; several which were bacteriologically examined at a large hospital were found to be teeming with micro-organisms.—Professor STRAUB pointed out that most of the infections at operations arose from the spread of organisms which were already resident in the eye. His practice was to carry out the sterilising and cleansing procedure on the patient for three days before operating.

Mr. C. WRAY read a paper on the Treating of Dislocated Lens. He said he did not consider needling was a form of treatment of dislocated lens. If the lens were very much displaced, iridectomy might be the right thing to do, but he did not think it was generally sufficiently displaced to justify that procedure. If the natural tendency of the lens was to become dislocated, he did not hesitate to do couching.—The paper was discussed by Professor LANDOLT, Mr. STORY, Mr. PRIESTLEY SMITH, Lieutenant-Colonel ELLIOT, Mr. ROWAN, Professor STRAUB, and Mr. J. GRAY CLEGG.

Friday morning was devoted to the subject of Post-operative Complications of Cataract Extractions. The discussion was opened by Mr. E. TREACHER COLLINS, and he treated it chiefly from the pathological point of view. He first of all called attention to the difference noticed in the healing of extraction wounds after the different forms of incision made by different operators, and he described how some incisions healed much better than others. He greatly favoured the incision which aimed at the cutting of a conjunctival flap. If the wound did not heal readily it was possible for a down growth of epithelium to take place, and this might spread over the whole of the anterior chamber, and be the cause of blocking of the angle of the anterior chamber, and thus of causing a condition of glaucoma. He

discussed the effect of delayed union of the posterior lip of the wound and the cause of striated opacities of the cornea after extraction. Prolapse of the iris causing a bulging cystoid scar sometimes led to a late suppurative condition of the uveal tract which might occur months or even years after the healing of the wound. Astigmatism varied enormously in amount after extraction, and largely depended on the healing of the wound and the way in which the flap was in apposition. Suppurative inflammation of the cornea was most often caused by the pneumococcus, but the frequency of this had been greatly diminished by aseptic precautions, as sterilisation of instruments. Thus in a series of Moorfields cases published in 1876 the percentage of eyes lost from this cause was 6·2. In another series published in 1894 it was 1·7, and in Mr. Collins's own cases done between 1900 and 1912 it was 1·15 per cent. No sterilisation of instruments was done at this hospital previous to 1883. He advocated the use of the galvano-cautery in such cases, and he had also seen good results follow the use of vaccines, but as other local treatment was always carried out it was difficult to say how much good really resulted from the injections. In some cases posterior synechia developed in quite quiet eyes, and these he did not look upon as being septic; in like manner non-septic "keratitis punctata," which was certainly non-septic, could often be found in cases running a normal course if these dots were really looked for. He thought it quite a fallacy to think that the mere presence of soft lens matter in the anterior chamber was capable of producing iritis, but when it was mixed with aqueous it certainly formed a very good nutrient medium for the growth of organisms if any were allowed to be present. With regard to the development of sympathetic ophthalmitis he had seen several cases which had greatly benefited by the use of salvarsan, and he also alluded to the information to be derived in dangerous cases by having a blood count done. He discussed in detail the way in which glaucoma was produced after an extraction or a needling of capsule and the ways of treating them. He finally dealt with expulsive hæmorrhage, detachment of the choroid, opaque membranes, vitreous opacities, and detachment of the retina.—Lieutenant-Colonel HERBERT dealt with the subject from the clinical side. He said that the most serious after-complication of cataract extraction was that due to infection. He strongly advocated the very thorough irrigation of the conjunctiva with perchloride of mercury, and gave statistics showing how in India suppuration became all but unknown after this was carried out in a thorough and systematic manner. The usual strength he used was 1 in 3000. This certainly had the drawback that it did irritate the conjunctiva and subsequently led to a further development of micro-organisms than would otherwise have been the case, though by this time the wound had healed; but it should be taken into consideration if it were contemplated to do a further operation within the first two weeks, such as very early needling. He was strongly in favour of making a large conjunctival flap with the original incision for the extraction.—Sir ANDERSON CRITCHETT considered that Mr. Treacher Collins had placed upon a firm pathological ground questions upon which the profession was previously in a condition of uncertainty. He described what he considered to be the best procedure in complicated cases of cataract where the iris had been drawn up into the wound or where there was a dense capsular membrane. No class of case required greater experience, and he discouraged the slightest empiricism, advocating eclecticism, adopting the procedure found suitable to each particular case.—Mr. SIDNEY H. BROWNING read an interesting communication on the subject, in which he said that out of hundreds of cases examined at Moorfields Hospital before the cataract operation only one case was pronounced bacteriologically clean which subsequently became infected after operation. Three of the 14 unsatisfactory cases during the last four years had been in eyes which had been reported unfit for operation, but were nevertheless operated upon. All these eyes were lost. Some of the chronic cases of low virulence responded to vaccine treatment, some yielded to salvarsan and neosalvarsan. He suggested that causes for sepsis should be searched for further afield than in the eye itself—viz., in the gums, nose, throat, &c. Many of the infections he had found to be endogenous, not arising in the conjunctival or lacrymal sac. The practice of bandaging the eye for 24 hours previous to operation and deciding whether the eye was fit for operation by the comparative absence of pus on the bandage he considered to be bad from a bacteriological point of view, for in several cases examined carefully the organisms present had increased during the time the bandage was in position, and some forms of virulent organisms were present after the bandaging which had not been detected before.—Mr. C. KILLICK described his results in 101 serial cases, one of which suppurated. During three years in his own practice he had had only three cases of suppuration after cataract extraction out of 1000 cases. One eye in each of these three cases was restored to sight. He also described the varieties of "after-cataract," and said he had had to needle 28 times in all his cases for capsular proliferation.—Mr. C. A. WORTH spoke of hæmorrhage occurring into the anterior chamber five days after the operation, and he regarded that as peculiar to the operation on the conjunctival flap; he had not seen it where the incision had been corneal, and it probably occurred after some movement on the part of the patient, not necessarily a blow. This hæmorrhage retarded convalescence. He had adopted a conjunctival flap in all cases and keeping the patient quietly in bed for a longer time than for corneal discission. He also spoke of the accident of vitreous coming forward into the anterior chamber through the discission of the membrane. At the time of the extraction he always divided the capsule straight across; he made no attempt at the V-shaped opening, so that in most of the cases there was an anterior capsule left in the line of the pupil.—Mr. A. W. ORMOND read notes of two cases in which post-operative complications occurred after removal of lens. Both were endogenous infections.—Mr. STORY said he had been able to assist some cases of wound infection by the application of the electro-cautery to the edges of the wound and by a subconjunctival injection of cyanide of mercury. He believed in the majority of cases of inflammation after cataract extraction it was an exogenous infection, and it had long been his practice before operation to make careful examination not only of the eye, but also of the nose and mouth. If there were many organisms operation was deferred, and the patient submitted to a cleansing and fortifying treatment.—Dr. G. F. ALEXANDER spoke of the great instruction he had received from operating in Lieutenant-Colonel Elliot's clinique at Madras, and related some of the impressions he had derived from the wealth of material available therein.—Lieutenant-Colonel ELLIOT spoke in high praise of Mr. Collins's contribution to this subject, and declared that there was no ophthalmologist for whose work the younger practitioners in India had a more profound admiration. He also thanked him for the generous terms in which he had acknowledged Colonel Herbert's valuable work in the same direction. He (the speaker) had himself worked hard for a number of years on the subject of post-operative astigmatism, and Mr. Collins's present paper had been most valuable to him. He supported Mr. Collins's remarks about the influence of traumatism on the appearance of post-operative opacities. Where there was a large lens which had to be delivered through a tight wound there was apt to be striated keratitis. For non-inflammatory cataract he used two needles; for inflammatory cataract he used the knife, and if that failed he opened the chamber. He did not cut the capsule, but cut the healthy iris.—Professor LANDOLT expressed his great satisfaction with the contributions of the openers, and said his experience had led him to the same conclusions. One of the most dreaded complications, apart from sepsis, was prolapse of the iris. To avoid this he always performed iridectomy with the cataract extraction, excising the iris widely, often in two cuts, so that after the section it retracted by its own elasticity. If part of the iris were entangled in the scar he would cauterise it with the galvano-cautery, afterwards covering with a flap of conjunctiva. He had always been sceptical as to the use of the preliminary bandaging; and he proceeded on the assumption that no conjunctival sac was free from pathogenic germs. Moreover, danger of infection persisted so long as the wound remained open. He pictured it as a race between the development of noxious germs and the closure of the wound. If the eye were tied up 24 hours before operation the development of these germs was favoured and the patient's recovery handicapped. He did not agree with the use of strong antiseptics for cleansing afterwards, though in conjunctivitis he would even use

nitrate of silver. He showed his forceps for the purpose of dealing with secondary cataract.—Dr. G. MACKAY asked whether some weaker preparation than 1 in 3000 perchloride would not do. He had given up strong solutions because of the frequency of posterior corneal opacities. His preparation of the patient consisted of regular douching of the conjunctiva with sterile saline or boric lotion. In this connexion argyrol was also useful, employed two or three times a day.—Professor UHTHOFF also described his methods and experiences in the operation, and was followed by Mr. THOMSON HENDERSON.—Professor STRAUB spoke of the chronic inflammation which commenced in the second week after operation, and said he had not seen this occur when the toilet after the operation had been well and carefully done. He also detailed his method for preventing squeezing of the eye, this squeezing sometimes accounting for the loss of the eye.—The PRESIDENT said they all realised that the essential necessity was the production of absolute local asepsis, or antisepsis, the most rigorous cleanliness of instruments, patient, and person. Most of the cases of sepsis he regarded as exogenous, but there were cases of endogenous infection. Cases such as Mr. Ormond related he considered to be gouty, using that term in its generic sense. He referred to the possibility of sepsis from the teeth and from metastatic inflammation. He related some cases.—The openers of the discussion briefly replied.

On Friday afternoon a clinical meeting was held at the Central London Ophthalmic Hospital, when the following cases were demonstrated and discussed.

Mr. F. A. JULER: 1. Hyaline Bodies on the Optic Disc. 2. Congenital Ophthalmoplegia.

Mr. LESLIE PATON: Congenital Malformation of the Disc.

Mr. M. S. MAYOU: 1. ? Tuberculous Mass in the Optic Nerve Sheath. 2. ? Inflammatory or Congenital Mass around the Nerve Head.

Mr. CECIL GRAHAM and Mr. LESLIE PATON: Cases of West's Operation for Lacrymal Obstruction.

Mr. TREACHER COLLINS: Concussion Injury with Rupture Extending Across the Optic Disc.

Mr. C. WRAY: 1. Coloured drawing of the "Rare Cases of Corneal Disease" shown at the last meeting. 2. Two cases of Ectopia Lentis. 3. Case of Intra-orbital Neoplasm. 4. Lenticonus. 5. Case of 6D. of Hypermetropic Astigmatism cured by the cautery; vision 6/6.

Mr. SYDNEY STEPHENSON: Case of Sympathetic Ophthalmitis treated by six injections of neosalvarsan.

Mr. R. R. JAMES: 1. Massive Tubercle of the Iris. 2. Crater-like Hole at the Disc, with Macular Changes.

Mr. G. COATS showed and described a case of Congenital Partial Paralysis of the Oculo-motor Nerve, with cyclical contraction and dilatation of the pupil. The condition was observed in the left eye of a girl aged 10, and had been present since birth. The signs of oculo-motor paralysis were: partial ptosis, divergence, abolition of upward, and limitation of inward and downward movement. The cycle of pupillary phenomena consisted of a relatively rapid contraction, followed by a more gradual dilatation. The movements were not strictly rhythmical, and movement of the eye to the right, whether on convergence or conjugately, tended to induce contraction and render the phase of dilatation more intermittent and less complete; relaxation of the internal rectus had the opposite effect, but the play of the pupil continued even when the adducted or abducted position was continuously maintained. During contraction the pupil was immobile; during dilatation it responded to light and consensually. In ordinary circumstances the stage of myosis was accompanied by a contraction of the ciliary muscle and by slight raising of the lid. The eye was astigmatic and amblyopic, the other being slightly hypermetropic. Some 19 cases of this affection had been recorded, most of them in recent years. Characteristic of the group was a partial third nerve paralysis, usually, but not always, congenital, and interrupted by periods of activity in the internal rectus, levator palpebræ, sphincter pupillæ, and ciliary muscle. The suggested explanation of Salus was stated and discussed—that during the repair of a lesion of the third nerve some of the axis cylinders sprouting from the central end made a kind of "false junction" and so connected a given nerve centre with a muscle or group of muscles not belonging to it. If, for instance, all the fibres which should go to the internal rectus were diverted to the sphincter, then an effort at adduction would result only in a contraction of the pupil, and a partial side-tracking of these fibres would produce partial phenomena of the same nature. This hypothesis, however, did not readily explain why the false junction should invariably take place between the internal rectus fibres (occasionally *also* the inferior and superior rectus fibres) and the pupillary and levator fibres—why, for instance, the attempt to look inwards was never associated with a movement upwards of the globe; something a little more haphazard might be expected in the case of nerve fibres finding their way at random through a mass of inflammatory material.

On Saturday morning Mr. THOMSON HENDERSON demonstrated and described a pressure gauge which he had devised for measuring changes in the intraocular pressure instead of the digital pressure in order to test the intraocular tension.

Mr. C. B. GOULDEN read an instructive paper on Optic Neuritis and Spinal Myelitis, describing a number of cases which illustrated the usual progress of the disease.—Mr. J. B. LAWFORD, who discussed the paper, described a case in 1884. He remarked that the profession remained as ill informed as to the causation of the disease as it was 30 years ago. He hoped a similarly careful investigation of future cases would be made as that by Mr. Goulden.—Dr. GORDON HOLMES related three cases of the condition, one of whom recovered completely after being as desperately ill as possible. In the cases which he had examined post mortem the most extensive lesion was in the chiasma or in the optic nerve. There was considerable disintegration of nervous substance. Axis cylinders remained practically intact. The actual infecting agent was not yet known.

Mr. G. T. BROOKSBANK JAMES read a paper on Iridosclerotomy in Glaucoma. Having referred to previous communications on the subject he described the operation that he adopted. A large conjunctival flap was turned down well over the corneal margin consisting only of the superficial part of that structure. An incision was then made transversely close up to the reflected conjunctiva, being about 1 mm. within the limbus. A second incision was commenced at one extremity of the first, and diverging somewhat finished close to the other extremity, and included about $\frac{1}{2}$ or $\frac{3}{4}$ mm. of scleral tissue at this extremity of the incision. The anterior chamber was then opened by deepening the central portion of the first incision. After the aqueous had slowly escaped the incision was enlarged to its extremities. A repositor being used to free the flap from any deep attachments, it was separated through the length of the wound and turned outwards. A medium-sized iridectomy was performed and the conjunctival flap was then replaced. He claimed for the operation that the conjunctival flap was a great safeguard and was necessary to allow of filtration. The opening in the sclera was a chink instead of a hole and facilitated the escape of fluid all along the wound. The iridectomy was always satisfactory and he had never known impaction of the iris tissue. The safety of the operation was due to the position of the incision and to the fact that the aqueous escaped very slowly. Having compared the results of his operation with trephining, he far preferred the operation he had described for the permanent relief of tension. He showed some of his cases illustrating the method.

Dr. C. O. HAWTHORNE showed a number of Perimeter Charts taken from cases in which homonymous hemianopia was the principal or only evidence of intracranial disease. In his first group he placed cases of cardio-vascular degeneration with or without renal disease, the hemianopia here being due presumably to arterial obstruction or rupture. In a second group were described cases of homonymous hemianopia occurring in young women free from all evidences of cardio-vascular or renal disease but the subjects of anæmia or chlorosis, and in these cases it was argued that the hemianopia was probably due to venous or sinus thrombosis within the skull. Rarely a similar condition developed in epilepsy, and here also it might be possible to hold that sustained arterial spasm might lead to capillary and venous thrombosis, which, occurring in the visual tract posterior to the optic commissure, would be sufficient to account for the homonymous hemianopia.—The paper was discussed by Mr. BROOKSBANK JAMES, Mr. D. LEIGHTON DAVIES, Dr. ALEXANDER, Professor LANDOLT, Professor

UHTHOFF, and the PRESIDENT, and Dr. HAWTHORNE replied.

Mr. M. S. MAYOU read a communication entitled "Diseases of the Eye in Animals," which was illustrated by a number of photographs.

Mr. GRAY CLEGG read a paper on a case of Senile Cataract with Two Nuclei. In 1904 he saw a male patient, aged about 70, who was suffering from a senile cataract. The ordinary method of extraction with iridectomy was adopted. After rupturing the lens capsule with a cystotome Mr. Clegg expressed the lens, when a dark-brown nucleus escaped, but on further stroking movements to clear away the cortex a second nucleus presented itself and was removed. The operation was completed and nothing further worthy of note occurred. On examination one nucleus, which he took to be the anterior one, was exactly of plano-convex shape, but the other was in the form of a positive meniscus with a small elevation at the centre of the concave surface. Each nucleus measured 5 mm. in diameter, and was hard and dark brown in colour. The formation of the two nuclei had probably begun at an early age, probably before 25, that being the time at which a nucleus was recognisable, but, of course, sclerosis of the inner central portion of the lens began much earlier.

Mr. GRAY CLEGG also read a commentary on a case of Death following Open Evisceration. The patient, a man, when aged 47 was struck on Feb. 27th, 1906, by a chipping of hot metal on the right eye. A few days later he was admitted to the hospital suffering from an extensive ulcus serpens with hypopyon. Useful sight was destroyed, but the eye became quiet with the formation of a dense leucoma, involving the whole of the front of the eye. Some years after, on Oct. 2nd, 1913, he again attended at the hospital under Mr. Clegg's care with signs of early panophthalmitis, and four days later open evisceration was performed at his direction. On Oct. 8th the patient became rambling in his speech and very restless. The temperature was 99° F., the pulse was regular, but the breathing was rapid; there were no physical signs of pneumonia. It was considered advisable to remove him to a general hospital, where acute post-operative mania was diagnosed. He died the following day at 1.30 P.M. A post-mortem examination was made. There were no external signs of disease or injury except the eviscerated globe, which was half full of thick gummy pus. There was no evidence of inflammation in the conjunctiva, cellular tissue of orbit, or lids. The surface of both cerebral hemispheres was intensely injected and covered with a thin layer of greenish-yellow pus, these changes being marked on the frontal lobes. The optic nerve of the operated right side was considerably swollen, and showed many minute vessels on the surface. On cutting it across at the optic foramen a bead of pus exuded at once from the cut surface of the distal portion. There was no evidence that the pus had reached the brain through the sphenoidal tissue. The left optic nerve was normal. The whole of the base of the brain was bathed in thick pus. Nothing abnormal was found inside the brain. There was no evidence of any ear disease, and the result of the examination was to show clearly that the infection had reached the meninges *viâ* the right optic nerve. In other respects the organs were those of a well-nourished healthy male. Mr. Clegg had had since November, 1909, 33 cases of complete purulent panophthalmitis due to all causes. Open evisceration had been adopted in all of them, and in 27 a small hard stump had resulted, but in 6 the recovery was complicated by sloughing of the sclera which was noted at intervals varying from ten days to three weeks from the time of the operation. The operation for open evisceration for panophthalmitis had always been considered to be free from the risks incurred on enucleation.

Mr. E. E. MADDOX described the use of a traction thread passed through the insertion of the superior rectus muscle to facilitate the toilet of the iris in intracapsular extraction of the lens, and showed specimens of Colonel Smith's instruments which he had had made of the light metals, magnalium and aluminium. He also showed an improved form of his simpler pattern of axis-finder for cylindrical lenses.

Mr. COATS reported a case in which after a blow the pigment epithelium and dilatator had disappeared from a sector-shaped area about 6 mm. broad in the temporal half of the iris. On external examination the iris stroma in this area appeared to be almost normal, but on illumination with the ophthalmoscope light was transmitted through interstices. With the trans-illuminator the translucency of the sector was almost complete, the appearance of a coloboma covered with a very delicate veil being simulated. Elsewhere the iris transmitted no light. Under a mydriatic the inner, upper, and lower parts of the iris retracted perfectly, but the outer remained quite flaccid, the edge of the pupil forming a straight vertical line and remaining in its former position. The pigmented margin was absent in the outer half of the pupil, but present elsewhere. The colour of the irides was a moderately deep greenish-blue. Vision 6/12 and J.1. There were no changes in the deeper parts of the eye. The condition was of great rarity, but had been described by Gelpke, Pohlenz, and Boerma, and was attributed either to driving back of the iris to such an extent as to produce an indirect rupture of its posterior, less elastic layers, to direct injury by a penetrating instrument thrust up between the iris and lens, or to rupture from behind, by levering or tilting forward of the lens against the posterior surface of the iris. The first of these seemed to be the most probable, the rupture resulting either from simple stretching or from nipping of the iris between the cornea and lens. It had recently been asserted by Rubel that the imperviousness of the iris to light was chiefly a function of the iris stroma, the pigment epithelium being relatively of little importance. This case, on the contrary, showed that when the pigment epithelium was absent in a lightly pigmented iris the stroma presented scarcely any obstacle to the passage of the brilliant light of the trans-illuminator. The observation confirmed a statement by Fuchs that the depth of pigmentation in the epithelium was very variable, and that its amount was a most important factor in determining the translucency or otherwise of the iris.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

Exophthalmic Goitre.—Exhibition of Cases.

A MEETING of this society was held on May 1st at the West London Hospital, Dr. F. S. PALMER, the President, being in the chair.

Dr. F. G. CROOKSHANK read a paper on Exophthalmic Goitre, its Pathogeny and Treatment. He discussed the functions of the thyroid gland in health, describing them as having relation to nervous mechanisms, to the work of other endocrinic organs, to processes of metabolism, and to the organisation of defence against parasitic infections and toxæmias of endogenous or microbic origin. Assuming that symptoms of the disease were principally due to a dysthyreosis, he pointed out the clinical antecedence in different types of cases of nervous derangement, of endocrinic irregularities, of metabolic perversities, and of infective or toxæmic processes, suggesting that the hyperplasia was generally due to definite call on the energies of the organ in respect of one or other of its various functions. He insisted on the importance of the recognition of vicious circles in Graves's disease, and on the proneness to the occurrence of such circles in individuals whose nervous balance was marked by sympatheticotonus, or whose endocrinic system was disturbed by the persistence or enlargement of the thymus. He also discussed the rational indications for treatment, alluding to the necessity for prolonged coöperation between physician and surgeon. Dr. Crookshank emphasised the value of physostigma, given by the mouth in the form of the tincture, in reducing tachycardia, and spoke of the very great improvement that sometimes attended the administration of thymus substance itself. Mention was made of the various practice of different surgeons in regard to early thymectomy, to thyroidectomy accompanied by thymectomy, and to thyroidectomy without thymectomy, as well as to the supposed contraindication to thyroidectomy afforded by the presence of an unusually large thymus. In conclusion, he declared that, although the physician must not regard thyroidectomy as a *dernier ressort*, the surgeon had no justification for claiming that surgical treatment afforded the only rational method of therapeusis.

A discussion followed which was opened by the PRESIDENT. He defined Graves's disease as a glandular neurosis characterised by tachycardia, tremor, protrusion of the eyeballs, and

enlargement of the thyroid, together with various neurasthenic and vaso-motor disturbances, the result of hyperthyroidism. The normal thyroid extracted from the system a toxic product, and neutralised it before it was thrown into the general circulation. Primarily the disease affected the vaso-dilators of the head and heart which were situated in the medulla and cervical sympathetic nerve, and he described the morbid changes found in these regions. The medical treatment was far from satisfactory. Rest was the first essential, and the avoidance of all excitants. The bromides with belladonna or strophanthus were of service. Lancereaux claimed brilliant results from quinine and ergot. Thyroid extract in his experience was not only useless but sometimes harmful. He had not seen any good from the administration of thyroidectin, nor from certain serums on the market. Some amount of success had been obtained by the use of galvanism with the negative pole placed over the thyroid and from a mild faradic current.

Mr. JAMES BERRY insisted that a theory of mere hyperthyroidism did not wholly explain all the facts of the disease, a dysthyreosis being more probable. From a clinical point of view it was well to bear in mind that there existed a large class of cases which were often loosely included under the somewhat misleading term of "exophthalmic" goitre. A common type presented a unilateral thyroid tumour in association with the usually accepted signs of Graves's disease, but without exophthalmos. Such could almost always be cured not only of the tumour but also of the tachycardia and nervousness by a suitable operation and one with comparatively little risk. The surgical treatment, however, of the classical type of the disease had to be approached with considerable caution. In these cases there was a special tendency to hæmorrhage owing to the condition of the gland tissue, and these patients did not withstand hæmorrhage well. He wished to emphasise the fact that the avoidance of hæmorrhage was the main point to be aimed at. Moreover, he had very little belief in the doctrine that undue handling of the gland forced an excessive amount of thyroid secretion into the circulation. Few diseases more urgently required coöperation of physician and surgeon. Very acute cases in which thyroid intoxication was severe were best treated medically until one of the usual periods of remission set in. Cases with grave visceral complications were not suitable for operation. The most common and serious complication was dilatation of the heart, and surgical intervention should be considered before continuing to treat a progressive case by medical means until irremediable cardiac dilatation had supervened. The operation that was followed by most benefit was undoubtedly removal of a portion of the gland, generally one-half of it, but in many of the more severe cases ligation of one or more superior thyroid arteries was of considerable value, and the degree of reaction that followed afforded the surgeon a fairly accurate means of judging whether he should subsequently proceed to the larger operation. In his opinion a well-executed operation upon a suitable case afforded, in the present state of our knowledge, the best means we had of benefiting or curing the sufferers from this most troublesome and serious disease.

Mr. DONALD J. ARMOUR welcomed the early coöperation alluded to by the former speakers. The surgical treatment was not emergency surgery, nor should the operation be undertaken during periods of exacerbation or excessive activity of the disease, otherwise the mortality would be high. Acute delirium, continuous vomiting and diarrhœa, and profound emaciation were serious symptoms, and operation should not be undertaken until such condition had subsided. He agreed with Mr. Berry's remarks concerning dilatation of the heart. A proper selection of cases should reduce the former high mortality to one of from 1 to 4 per cent. He had now operated in a series of some 40 cases, and in the majority he had performed a partial thyroidectomy, always removing at least one-half of the gland together with the isthmus. The ligation of arteries was a simpler operation and associated with less risk than that of partial thyroidectomy, but the desired results were not as surely or as quickly attained. In certain cases ligation should precede thyroidectomy. In the ligation of the vessels the ligature should be placed close to, or should include some of, the gland itself at its superior pole. This was done to prevent a reversal of the circulation by the anastomotic branches of the inferior thyroid artery. He was convinced that the greatest care should be taken to prevent two things—namely, the loss of blood and any rough handling or squeezing of the gland tissue. The greatest delicacy of handling was required to avoid the tearing of the extremely thin walls of the thyroidal veins. All vessels should be clamped on both sides at the place where they were divided as they bled freely from the gland side when cut. He thought it extremely important to give the patients, after the operation, large quantities of fluid by the mouth, subcutaneously and by the rectum. Any remarks about anæsthesia he would leave to Mr. Page, who had been associated with him in practically all his cases.

Mr. H. M. PAGE said he began by using chloroform in these cases, but for the last few years had given nothing but open ether. A sleeping draught was given at bedtime, and an injection of morphia, scopolamine, and atropine in the morning an hour before operation. Ether was given by the open drop method, every care being taken to prevent frightening the patient. When the patient was unconscious a strap was passed round the table just above the knees and ankles, and the arms were also fixed. This was done as the anæsthesia was kept as light as possible and slight movements would otherwise occur. He thought the site of operation should also be infiltrated with novocaine, but that this should be done after consciousness was lost.

Finally, Dr. CROOKSHANK replied to questions arising out of his paper.

Prior to the discussion, Dr. DOUGLAS G. RICE-OXLEY showed a case of Graves's Disease in a girl aged 12 years, and Mr. N. BISHOP HARMAN a case of Distichiasis. The meibomian glands at the inner margin of the lids instead of secreting grease had "secreted" hairs, with the result that a double row of eyelashes appeared. It was a congenital anomaly, but in this instance not hereditary.

LONDON DERMATOLOGICAL SOCIETY.—A meeting of this society was held on April 21st, Dr. Morgan Dockrell, the President, being in the chair.—Dr. J. L. Bunch showed the following cases: 1. A case of Paget's Disease of the Right Nipple in a woman aged 50, which commenced 14 months ago. 2. A case of Congenital Syphilis. There was a slight scar present on the right wrist. Fourteen months ago another lesion developed on the outer side of the right orbit, also a circinate patch on the side of the face; the lesions showed atrophy and scarring. 3. A case of Psoriasis on a Syphilitic Base. The lesions, which were present below the left knee and on both elbows, showed a slight scaliness and marked induration.—Dr. W. Griffith showed a woman suffering from Lupus Erythematosus of one year's duration. The treatment he had been using in the case was lead and calamine lotions, followed by applications of salicylic acid and collodion. The eruption had disappeared and the scarring was barely perceptible.—The President showed a man, aged 50, who had been suffering from a Generalised Eruption, accompanied by a marked Œdema of Hands and Feet. The condition had been present on and off for two and a half years. The lesions were more prominent at night. There was practically no irritation. The Wassermann reaction had been negative. A section had been microscopically examined but did not reveal much as to the disease. He suggested that the case might be a form of giant urticaria of the adult type, or a toxæmia.—In the discussion which followed, Dr. Griffith said he thought the swelling was due to angio-neurotic œdema, and the spots which only lasted a few days were blood extravasation, purpuric in nature. The cause of the disease was probably a toxæmia of microbic origin.—Dr. W. Knowsley Sibley considered that the case should come under the group of urticaria pigmentosa adult type, which he said was distinctly different from the child type.—Dr. Simonds Gooding said he thought the disease was urticarial in nature, due to a toxæmia. An oral sepsis might account for the condition.—Mr. Dennis Vinrace asked what drugs had been administered, because the eruption had to him the appearance of a potassium iodide rash.—Dr. Reeve said he was called to see a patient a few days ago who had marked œdema of the body, also a slight rash. He examined the heart, the urine, and the blood, but could find nothing. On making a further investigation he found that the patient had been taking drugs every night for nine months. He treated the case with digitalis and hot baths, and the

condition all cleared up.—Dr. Knowsley Sibley showed a girl, aged 19, who was born with Ichthyosis. Four other members of the family were similarly affected. There was also an eczematous condition of the right nipple, and an areola which was hypertrophied with oozing. The breast was painful. A section had been taken which resembled the description of an early stage of Paget's disease, but the age of the patient was against this.—Dr. R. Prosser White read a paper entitled "Some Dermatological Problems," in which he discussed the action of certain irritants to the skin which were responsible for trade dermatitis. He also mentioned a case of milk erythema that was set up in a child, aged 6 months, from simply touching the skin with cow's milk.—Dr. Griffith and Mr. H. C. Samuel joined in a lengthy discussion and Dr. Prosser White replied.

NORTH OF ENGLAND OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.—A meeting of this society was held in Manchester on April 17th, Dr. J. H. Willett, the President, being in the chair.—Dr. W. A. MacKay (Southport) exhibited a post-mortem specimen of Ruptured Tubal Pregnancy, the symptoms suggesting irritant poisoning. Sixteen hours after a meal containing bloater paste the patient had severe abdominal pain, vomiting, and diarrhœa; she became collapsed and died five hours later. Post mortem a ruptured right tube with a six weeks' fœtus was discovered.—Dr. W. E. Fothergill (Manchester) exhibited a specimen of Perithelioma of the Ovary, about the size of a fœtal head, removed from a woman aged 38 years.—Dr. J. Oldfield (Leeds) exhibited four specimens of Mesothelioma—one in the uterus, forming a tumour of the size of a full-term pregnancy; the second a pelvic mass consisting of uterus, both ovaries, and a retrocæcal mass; the third in the ovary; and the fourth in the kidney.—Dr. Fothergill and Dr. D. Dougal (Manchester) showed a specimen of Aneurysm of the Internal Iliac Artery. Cæsarean section had been performed for contracted pelvis ten months previously, and the aneurysm was first noticed three weeks after this operation. There seemed to be no connexion between the two, and they were of opinion that the lesion was present before the patient came under their observation.—Dr. W. K. Walls (Manchester) exhibited a specimen from a case of Cæsarean section and Wertheim's hysterectomy for Pregnancy, with Carcinoma of the Cervix and Double Papillomatous Ovarian Cysts. The patient was seven months pregnant, with fairly advanced carcinoma of the cervix. Both ovaries were cystic and lined with papillæ, one being of the size of a fœtal head and the other of an orange.—Dr. Oldfield read the notes of three cases of Ovarian Tumour Obstructing Labour. One child was delivered by Cæsarean section; in the second case abdominal section was performed and the obstructing tumour removed, by which time the child's head was on the perineum, so was extracted with forceps; and in the third case the cord was prolapsed and only feebly pulsating, the child being delivered by craniotomy and the tumour removed at a later date.—Dr. H. Clifford (Manchester) reported a case of Concealed Accidental Hæmorrhage recently treated by him in which he performed Cæsarean section followed by supravaginal hysterectomy. The patient was in an exceedingly serious condition, being so anæmic and so collapsed that neither the incision in the abdominal wall nor that in the uterus bled at all. The patient made a good recovery.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held at the Royal Infirmary on April 21st, Dr. Sykes being in the chair.—Dr. F. W. Eurich gave a microscopical demonstration.—Dr. W. Mitchell gave a demonstration of X Ray Plates, showing particularly the size and shape and position of the stomach in health and disease. The plates were taken at varying intervals after a barium meal, and showed especially how long a time it takes for the atonic and dilated stomach of pyloric obstruction to empty itself of its contents.—Dr. J. R. Gilmour read a paper on Mental Disease from the General Practitioner's Standpoint. He regretted that general practitioners took so little interest in their mental patients. If the medical man would only examine his mental cases in the same way as he examined an ordinary medical case, Dr. Gilmour was convinced of the enormous benefit which would accrue not only to the patient but also to the practitioner. Many cases now sent to the asylum could very well be treated at home and the patient saved the objectionable stigma of having been an inmate of an asylum. Dr. Gilmour gave several very interesting cases illustrating this point, and showed how entirely wrong it was to send every patient with mental symptoms straight to the asylum without first investigating the cause of those symptoms. He pleaded strongly for the establishment of "half-way houses" or nursing homes, where mental patients could be treated pending a definite decision as to whether such patients really required asylum treatment. He felt convinced that many cases in which a definite cause for the symptoms could be found—e.g., tumours of the breast, acute appendicitis, pyorrhœa, cases following influenza, &c.—recovered permanently and completely, and that it was utterly wrong to cast the slur of the asylum on them. In conclusion, he tabulated mental diseases as far as they concern the general practitioner as follows: (1) infective—e.g., influenza, pyorrhœa, cholecystitis; (2) circulatory—e.g., middle age, muscle weakness, especially of heart; (3) biochemical—e.g., exophthalmic goitre, uræmia, diabetes; (4) arterio-sclerosis; (5) alcohol.—Dr. Eurich, in discussing the paper, agreed in the main with what Dr. Gilmour said, but pointed out the difficulties of carrying out a thorough examination on a wildly maniacal patient.

Reviews and Notices of Books.

Die Vitamine: ihre Bedeutung für die Physiologie und Pathologie, mit besonderer Berücksichtigung der Avitaminosen (Beri-Beri, Skorbut, Pellagra, Rachitis). Anhang: Die Wachstumsubstanz und das Krebsproblem.

Von CASIMIR FUNK, Cancer Hospital Research Institute, London. Mit 38 Abbildungen im Text und 2 Tafeln. Wiesbaden: J. B. Bergmann. 1914. Pp. 194. Price 8.60 marks.

THE author states that this publication is the first attempt at a representation of our knowledge about vitamines and avitaminoses. In addition to the author's own work and views it includes much that is fragmentary and also much that is purely hypothetical. Many facts are still wanting, but it is a step in the direction of elucidating the physiology and pathology of such diseases as beri-beri, scurvy, pellagra, and rickets. By the word avitaminoses, coined by the author, is understood what is called in English "deficiency diseases."

Beginning with beri-beri and experimental beri-beri in animals, the author points out that though this disease has keenly interested observers for the last 20 years, mostly in countries where rice formed the chief diet of the people, it is only comparatively recently that this disease in man and polyneuritis in fowls or pigeons have been known to be associated with the use of polished rice as the chief food. With the introduction of mechanical mills and other means for polishing rice in Eastern countries the disease increased. When in 1882 Takaki introduced a mixed diet for use in the Japanese navy beri-beri practically disappeared.[1] In Java in 1895–96 Vordermann proved that the disease was associated with, and was due to, the continued use of polished rice, while in 1897 Eijkman showed that in polished rice that part of the rice which protects from the disease is lost, while Fraser and Stanton showed that the protective substance lies in the surface layers of rice grain. Then follows an account of the geographical distribution of beri-beri, its pathology, and its symptomatology in its atrophic, paralytic, and dropsical forms.

The experimental production of the disease in

[1] THE LANCET, May 28th, 1906, p. 1451

fowls (polyneuritis) is next considered and illustrated by many photographs of fowls and pigeons. A long account is given of the author's experiments to isolate and determine the nature of the protective or healing substance—the vitamine—that occurs in the outer layers. Vitamines occur in many foods besides rice, and they have been specially investigated in yeast by the author. An account of his methods is given.

Next the author deals with the scorbutus group, including experimental scurvy in animals and Barlow's disease, which are discussed on the same lines as in the case of beri-beri. The vitamines of milk are specially considered, and then the intimate relations between beri-beri and scorbutus are discussed. Pellagra and sprue are next considered, and then the prophylaxis, pathogenesis, and therapeutics of pellagra in the light of the vitamine theory. The consideration of rickets, osteomalacia, and spasmophilia occupies the fourth section. Disturbances of nutrition in infants are then passed in review and linked up with deficiency diseases. A short account is given of the chemistry of growth in plants with remarks on growth and the cancer problem, and the author brings his treatise to a close by a discussion of vitamines in their relation to the phenomena and doctrines of nutrition, metabolism, and internal secretions.

Altogether this is a most interesting and suggestive treatise—a pioneer work opening up many new fields of research of great practical importance, not only to inhabitants of the tropics, but to those who live in temperate climes as well. We hope the author will see his way to publish it in an English garb. The literature is fully given and is already extensive. With regard to recent contributions on the subject in THE LANCET, we may refer to Dr. Casimir Funk's own paper on "Studies of Growth: The Influence of Diet on Growth, Normal and Malignant," which appeared on Jan. 10th, 1914; to a paper on "Unpolished Rice and Beri-Beri," by Dr. Henry Fraser and Dr. A. Stanton in the same issue; to an annotation on March 21st; and to letters by Professor W. D. Halliburton (March 28th), and Professor Leonard Hill and Dr. Ralph Vincent (April 4th).

Minor Medicine: A Treatise on the Nature and Treatment of Common Ailments.

By WALTER ESSEX WYNTER, M.D., B.S. Lond., F.R.C.P., F.R.C.S. Eng., Physician to the Middlesex Hospital and Lecturer on Medicine in the Medical School. Second edition. London and New York: D. Appleton and Co. 1914. Pp. 275. Price 6*s*.

IN our review of the first edition of this work we expressed the favourable opinion we had formed of it, and a perusal of this edition has corroborated our previous impression.

Dr. Wynter has now prefaced the book by an "introduction" which contains many sapient and suggestive remarks. He points out the difficulty of steering a middle course between indispositions too trifling or familiar to deserve mention and those which already receive ample attention in more serious books on medicine. We entirely agree with him that still more formidable is the danger of including among trifling ailments phenomena which, though apparently of slight importance, may belong to really serious disease. He discusses some of the difficulties which may arise, and amongst other considerations points out that persistence or increase in any local sign or symptom suggests some underlying cause, and that the coincident occurrence of what is termed bodily illness goes far to confirm the suspicion of actual constitutional disease. He gives as an apt illustration the outbreak of warts, which in a young robust individual is a matter of small concern, but in an elderly person exhibiting cachexia and pigmentation may indicate that rare form of malignant disease, acanthosis nigricans. Dr. Wynter then proceeds to a survey of some points in the development, growth, maintenance, and decay of the human organism, which may be regarded as representing natural phases in the course of life, and he draws attention to the diet which is suitable at each age and to physiological changes which may possibly be exaggerated, so producing unnatural or morbid phenomena.

The general scope of the work remains as before, but the book has been revised and some additions have been made. It is a manual which will be found of value to medical men engaged in the general practice of their profession, for it contains, in a form that lends itself to easy reference, a large amount of information and numerous hints which are not met with in the usual text-books on medicine and therapeutics.

A Handbook for the Post-mortem Room.

By ALEXANDER G. GIBSON, D.M. Oxon., F.R.C.P. Lond., University Demonstrator in Pathology, Oxford, and Honorary Assistant Pathologist to the Radcliffe Infirmary, Oxford. London: Oxford University Press. 1914. Pp. 140. Price 3*s*. 6*d*.

THIS is just the handy little volume that the student should be encouraged to slip into his pocket when on his way to the post-mortem room. It is clear and terse and practical from beginning to end. No attempt is made to describe the pathological conditions met with. Instead the author has contented himself with a careful and lucid explanation of how each and every organ and structure can best be got at and removed for the purpose of complete investigation; how the various organs can best be examined after removal, and in each instance the chief points upon which attention should be focused; what to look for in the body cavities when emptied of their contents and how to examine the sense organs; how to make special necropsies, bacteriological and medico-legal; and—a somewhat important matter—how when the necropsy is completed the normal appearance of the body can best be restored.

We have nothing but praise for the matter contained in this small volume and the way in which it is presented, and regard the work as a useful addition to the Oxford Medical Series.

Materia Medica, Pharmacy, Pharmacology, and Therapeutics.

By W. HALE WHITE, M.D. Lond., Senior Physician to, and Lecturer on Medicine at, Guy's Hospital. Thirteenth edition. London: J. and A. Churchill. 1914. Pp. 695. Price 6*s*. 6*d*.

IN our review on March 9th, 1912, p. 654, of the twelfth edition of this work we remarked that Dr. Hale White's book has been found to be one of the very best treatises on these subjects which has been written, and we again endorse this opinion. It contains a vast amount of information which makes the book of value both as a text-book and as a work of reference.

In preparing this edition every care has evidently been taken to bring it up to date, and descriptions of several new drugs have been added, amongst

which we note medinal, omnopon, and adalin. Medinal is sodium-veronal and adalin bromo-diethyl-acetyl-urea, and both are stated to be useful hypnotics. Omnopon is a solution of the total alkaloids of opium as hydrochlorides, and freed from meconic acids, gums, and resins; it is of value in relieving purposeless coughing.

We once again express our appreciation of this excellent manual.

Ophthalmoscopic Diagnosis Based on Typical Pictures of the Fundus of the Eye, with Special Reference to the Needs of General Practitioners and Students.

By Dr. C. ADAM, Assistant at the Kgl. Univ. Augenklinik, Berlin. Translated by MATTHIAS LANCKTON FOSTER, M.D., Ophthalmic Surgeon to the New Rochelle Hospital; Member of the American Ophthalmological Society; Member of the American Academy of Ophthalmology and Otolaryngology. With 86 coloured pictures on 48 plates and 18 illustrations in the text. London: William Heinemann (Rebman, Limited). 1914. Pp. 229. Price 25*s.* net.

THE German edition of this book was reviewed in THE LANCET of Dec. 14th, 1912, and we were able to recommend it warmly as an excellent and cheap ophthalmoscopic atlas. Dr. Lanckton Foster is an excellent translator of German, and has carried out his part of the work well.

The author emphasises the real purpose of the book—that of serving as a systematic guide to diagnosis—and the text presents the subject matter from a different point of view to that of the ordinary text-book. It will be the more useful for this reason, and will form an invaluable aid to the student in the course of his clinical work. A few pages are devoted to the technique of the examination with the ophthalmoscope. Then follow in order the normal papilla and the normal fundus, conus and staphyloma, atrophy of the optic nerve, neuritis, the retinal vessels, the retina, and the choroid. The discussions of the various points of differential diagnosis are admirably treated, with frequent references to the excellent plates. In places the rather irritating method of question and answer, reminiscent of Mrs. Markham's history, is employed, but this is a venial fault. Sufficient attention is directed to the anatomical and pathological bases underlying the ophthalmoscopic appearances. Besides the brief general discussions each plate is fully described.

The work can be warmly commended, and Dr. Foster is to be thanked for rendering it more fully available to English-speaking students.

Ueber den Extrakardialen Kreislauf des Blutes vom Standpunkt der Physiologie, Pathologie, und Therapie.

Von Dr. KARL HASEBROCK, leit. Arzt des Hamburger Medico-mechanischen Zanderinstitutes. Mit 20 Abbildungen im Text. Jena: Gustav Fischer. 1914. Pp. 346.

THE author exposes an idea he has entertained for the last 20 years—viz., the great importance of the extracardiac circulation considered in its physiological, pathological, and therapeutical relations. As he is the chief medical officer of a medico-mechanical Zander institute, naturally this subject is one in which he takes a direct interest.

While admitting that the heart is, and must remain, the dominant apparatus of the circulation, the author lays great stress on the independence of the extracardiac circulatory apparatus. He argues for the existence of independent pulsatile movements of the blood-vessels, and he discourses on the existence of a pulsatile electrical action-current of the arteries—electro-angiogram—comparable to an electrocardiogram. According to him the effect of injurious agents falls first on the peripheral vascular system. There is a good deal of not too illuminating writing about aspiration at the extreme periphery of the vascular system. An account is given of the circulation in the capillaries, arteries, and veins, the significance of what is called the "diastole-systole" of the vessels as regards resistance and propulsion, the action of hormones, and of vaso-motor nerves. Attention is given to arterial blood pressure and its significance in nephritis and to some other diseases. Arterio-sclerosis is considered, and the remaining chapters deal with the significance of the extracardiac circulation in relation to "functional diagnosis," muscular work in games, training, and over-strain during severe muscular work, also in regard to gymnastic muscular work as a therapeutic cardiac agent. Finally, there is a short chapter on the neuroses of over-exertion and "fatigue of the circulation," "fatigue of the heart," and sclerosis.

Perhaps this book will interest most those who are concerned with the therapeutics of gymnastics and training generally.

LIBRARY TABLE.

A Short Practice of Midwifery for Nurses, Embodying the Treatment Adopted in the Rotunda Hospital, Dublin. By HENRY JELLETT, M.D., B.A.O. Dub., Master of the Rotunda Hospital, Dublin. Sixth edition. London: J. and A. Churchill. 1914. Pp. 508. Six coloured plates and 169 illustrations. Price 7*s.* 6*d.* net.—This edition has been carefully revised and brought into conformity with the existing practice of the Rotunda Hospital. A chapter has been added on obstructed labour, and in it the different causes of obstruction during labour are described. Little recommendation on our part is required of a book which is so well known as this small manual, and which has reached its sixth edition and fourteenth thousand. The book contains all that a nurse need know, and this is one of the best works of its kind.

Electro-pathology and Therapeutics. By ARTHUR E. BAINES and F. H. BOWMANN, D.Sc., F.R.S. Edin., &c. London: Ewart, Seymour, and Co. 1914. Pp. 120. Price 5*s.* net.—The first part of this book is stated to be a prefatory address on the nervous system in its relation to neuro-electricity. The term "neuro-electricity" is introduced, without definition or description of its meaning, into an account of the nervous system, which contains many inaccuracies and incorrect statements. The "neuro-electricity" is stated to be generated in the brain, while nerve currents are said to act on the ionised cell contents in the living portion of the body, and to be the cause of metabolic activity. The second part commences with a criticism of the results obtained by physiologists (the results are not stated) as erroneous and misleading. The deflections of an astatic mirror galvanometer are supposed to be caused by the "nerve currents," the amount of the deflection being altered in disease and the rapidity is said to enable the observer to form an estimate of the gravity of the disease. The "electro-pathology of inflammation," according to the authors, is the action of the temperature on the nerve sheath and

possibly on the vessel walls, and the breaking down of the resistance of either or both, so as to cause a leakage or short circuit of neuro-electrical current in the part affected. The treatment described by the authors is the application of a fluid (its formula is not given) which has great penetrative powers reaching the seat of the inflammation and stopping the leak—a fluid which can be taken internally and cannot fail to be of value in appendicitis and gastritis. The results of the authors' researches are presented to the medical profession and the general public. From what has been mentioned above, any criticism will, to qualified medical practitioners, be superfluous; but seeing that treatment of patients by electrical methods is so largely practised by people without medical qualification, it is regrettable that such teaching, plausible enough as it may seem to those who have little accurate physiological and clinical knowledge, should appear, and under such a title.

General and Practical Optics. By LIONEL LAURANCE. London: Published by the Author, Temple House, Temple-avenue. Second and revised edition. 1914. Pp. 363. Price 10s. 6*d.* net.—This book has been written by an optician for opticians. As such, it includes all the most valuable information on geometrical optics for the ophthalmic surgeon. It is accurate and well arranged. It collects in one volume many facts which must otherwise be sought in general treatises on optics, and which will often be found only with difficulty. The reader will require an elementary knowledge of mathematics to cope with the formulæ, but this should not debar the earnest ophthalmic student from attaining a thorough knowledge of so essential a branch of his subject.

Index Catalogue of the Library of the Surgeon-General's Office, United States Army. Authors and Subjects. Second series. Vol. XVIII. Tetamore-Tzschirner. Washington, 1912.—The eighteenth volume of this remarkable work, the assiduous and patient labour of which lays all medical scholars under a debt to the Government of the United States, contains 3865 author titles, representing 4117 volumes and 2693 pamphlets. It also contains 5223 subject titles in separate books and pamphlets, and 45,525 titles of articles in periodicals. The Surgeon-General's Library now contains 182,984 bound volumes and 320,343 pamphlets, and 110 new titles of medical periodicals have been added to the list of those indexed. The present volume bears the signature of Lieutenant-Colonel C. C. McCulloch, Junr., of the Medical Corps, U.S. Army, now librarian of the Surgeon-General's Office in succession to Lieutenant-Colonel W. D. McCaw. The most extensive article is that on Tuberculosis, which (with Tuberculin) occupies no fewer than 856 columns. Other extensive articles are those on Tetanus, which occupies more than 74 columns, Therapeutics (70 columns), Thrombosis (28), Thyroid Gland (51), Tongue (46), Tonsils (63), Trypanosoma and Trypanosomiasis (41), and Tumours (124).

MISCELLANEOUS VOLUMES.

OUR miscellaneous books for this week include an account of medical missionary work in India, a quasi-historical work dealing with hygienic matters in the past, a little book discussing some questions connected with blind deaf mutes, and additions to Shakespeareana and the table-talk order of book.

In the first named, *Jungle Days, Being the Experiences of a Woman Doctor in India* (London and New York: D. Appleton and Co. 1914. Pp. 297. Price 10*s.* 6*d.* net), Dr. ARLEY MUNSON describes how she felt a call to go to India to help her suffering sisters. Accordingly, having completed her medical studies in New York, she sailed for Bombay, and after a short stay at Sholapur was called to the post of medical superintendent of the Wesleyan Mission at Medak, Hyderabad. Dr. Munson does not say very much about her medical work, but writes pleasantly of the scenery and peoples she encountered in her various tours. One case which she mentions fills us with astonishment. On p. 64 she gives an account of a child of two, "whose eyelid healed well although it was gashed in half a dozen places by the horn of an angry bull. Mercifully the eye was spared." It seems to us that either the eyelid or the bull must have been of a size very different from the normal.——In *Le Passé Anecdotique* (Paris: Albin Michel), ERNEST LAUT discourses in a breezy way upon the hygiene (or absence thereof) in past times, and upon medical manners and customs from mediæval times down to 1830, when Victor Hugo, says M. Laut, left on record some scathing lines in an inn at Geneva as to its fleas, dirt, and general discomfort. In the eighteenth century it was common for inns to have two or three beds in a room, which travellers shared in common, a custom which gave rise to such situations as Sterne describes with his usual sardonic humour in the "Sentimental Journey." The condition of the streets in Paris and many other large towns was appalling as late as the end of the eighteenth century. Madrid had the worst reputation, as is shown by several travellers whom M. Laut quotes, and the same thing is testified to in a recently published work by Paul Fould, "Un Diplomate au Dix-Huitième Siècle" (Paris: Plon-Nourrit. 1914). The diplomat was Louis Augustin Blondel, who, among other impressions of Madrid, has left the following: "Il n'y avait dans la ville ni chaise percée ni lieux." No wonder that further on he describes the town as "très malpropre."——In *Man's Miracle, the Story of Helen Keller and her European Sisters, from the French of Gerard Harry* (London: William Heinemann. 1914. Pp. 197. Price 3*s.* 6*d.* net), M. HARRY describes the life and practical new birth of Helen Keller, who became deaf, dumb, and blind at the age of 19 months, and of Marthe and Marie Heurtin, of Poitou, who were born deaf, dumb, and blind. M. Harry argues, from the wonderful results which careful teaching has achieved in these sadly afflicted beings, that in humanity there is some "invisible mental spring" which does not exist in the lower animals. As to the Creator of this spring he will not give an opinion. But to many minds the case of Helen Keller, and still more of the two Heurtins, will go to prove the existence of that "particle of Divine breath" mentioned by Horace, of that "sense sent down from the heavenly citadel," of which Juvenal talks in the noble close to his XV. Satire. In the book just discussed we see how beings apparently completely isolated, except by touch, from their fellows can be taught, made able to communicate with those around them, and how their higher faculties can be nurtured and used.

Lovers of Shakespeare—and surely where shall they be found more numerous than in the profession which beyond all others holds fast to the rule, *nihil humani a me alienum puto?*—will gratefully welcome the posthumous publication by his daughter, Miss Rosaline Masson, of Professor DAVID MASSON'S "Shakespeare Lectures," which formed part of his professorial course on English literature at Edinburgh University. *Shakespeare Personally* is the title of the book (London: Smith, Elder, and Co. 1914. Pp. 242. Price 6*s.*), and it is an answer, to quote Professor Masson, to "that extreme compliment which it seems to be the whim of human nature to pay, at some time or other, to each one of those few personages of the past, the dimensions of whose existence have approached the enormous"—viz., that "enormously great existence is inconceivable except as non-existence." Professor Masson combines the actual knowledge of Shakespeare from external sources—and it is not a little greater than is commonly believed—with the portrait that may be conceived of him through a careful study of his writings, and succeeds in presenting us with a picture in which all the parts are complementary and in harmony. He traces the progress in Shakespeare's moods—first, the "Romeo-Proteus-Biron" mood, compounded of the passionate impetuosity, the all-for-love recklessness of Romeo, the instability and variability of Proteus, the wit, irony, and sharp-sightedness of Biron, characteristic of the centrifugal character of youth; then the "Jaques-Hamlet" mood, which combines the moralising

and sadness of Jaques with the speculation, self-communings, and inaction of Hamlet, the centripetal reaction from the preceding; the "high-tragic" mood, envisaging the high tragedy of tremendous moral realities of passions, fates, and frenzies of the full-grown man with its reactionary subjectivity of the "Coriolanus-Timon" mood, the mood that is apt in later middle age to follow the aggressive zeal to right this topsy-turvey world—the mood expressed so forcibly by Horace, *Odi profanum vulgus et arceo*, sick of the fruitless turmoils of the fickle multitude; and finally the "Prospero" mood, the balanced judgment of mature experience, viewing from the heights, with expanded view and more enlightened understanding, the "alarums and excursions" in the plains below. Survey follows of Shakespeare's "recurrences"—repetitions of word, phrase, verbal or formal tropes, ideas and sentiments—and "fervours"—magnificent bursts of expression, which render Shakespeare the great fount of quotation, the armamentarium of the declaimer. The volume closes with an analysis of Shakespeare's self-revelation in the sonnets. Altogether a noteworthy study.——*Pot Pourri Mixed by Two* (London: Smith, Elder and Co. 1914. Pp. 456. Price 6*s.* net), by Mrs. C. W. EARLE and Miss ETHEL CASE, is a volume of discursive correspondence between two amiable ladies, arranged in 12 articles, one for each month of the year, every article consisting of a letter from each correspondent. The book would have been the better for the services of a judicious editor. It contains much that is good sound sense, a great deal that is very interesting in the table talk way, but unfortunately not a little that is rather silly. It may be described as a package of mental sandwiches, the insides of which are "scientific diet," vegetarianism, and total abstinence from "alcohol and other stimulants, especially tea" (p. 34), the substantial covering of the sandwich consisting of botanical and other "nature studies," and the garnishings of such aromatics as poetical selections of unequal quality, and historical, archæological, and travel notes. As an example of balanced good sense (and there is plenty of such in the book) may be cited the very thoughtful views on the position of the "caged daughters." But above all, reference must not be overlooked to the excellent collection of vegetable recipes, at the end of each month, selected with due reference to those vegetables that are then in season. It is by no means necessary that one should be a vegetarian to appreciate adequately these excellent recipes.

JOURNALS AND MAGAZINES.

Quarterly Journal of Experimental Physiology. Editors: E. A. SCHÄFER, W. D. HALLIBURTON, C. S. SHERRINGTON, E. H. STARLING, and A. D. WALLER. Vol. VIII., No. 1. London: Charles Griffin and Co., Limited. 1914. Pp. 102. Price 7*s.* 6*d.*—The Self-regulation of the Acidity of the Gastric Contents and the real Acidity of the Gastric Juice, by Professor W. Boldyreff (Kasan). A sharp distinction must be drawn between the acidity of the gastric juice itself and the acidity of the gastric contents. The author finds that the acidity of freshly secreted gastric juice is constant (0·5 per cent. HCl). In the gastric contents, however, this acidity is rapidly lowered to a level which oscillates between 0·15 to 0·2 per cent. HCl, and the same thing happens when any acids foreign to the stomach are introduced into it. The interesting point is the mechanism by means of which this "levelling" result is brought about. The partial neutralisation appears to be due to the reflux into the stomach of alkaline juices from the duodenum, the pancreatic juice being the most important factor. The mechanism for maintaining the optimum level of acidity (0·15 to 0·2 per cent. HCl.) the author calls "the self-regulation of the acidity of the contents of the stomach."—The Nitrogen Excretion of Fasting Sheep, by Andrew Hunter. The Influence of Early Removal of the Thyroid and Parathyroid Gland upon Nitrogenous Metabolism in the Sheep, by Andrew Hunter. These two papers must be taken together. In the first the author seeks to determine the distribution of nitrogen in the urine of normal sheep, upon which it appears there are practically no data of value recorded in the text-books. For the second article the author made use of the thyroidectomised lambs used by Sutherland Simpson.[1] The author finds that sheep deprived at an early age of thyroid, and somewhat later of parathyroids, (1) excrete during a fast rather more nitrogen and rather more purin derivatives in relation to body weight than do normal animals, and that they are liable to succumb very early to the effects of inanition; (2) they excrete while fasting urine which is generally acid and never alkaline; (3) they invariably react to the withdrawal of food by the excretion of creatine in excess of creatinine and have a degree of sugar tolerance which is almost certainly above the normal.—The Nervous Mechanism of Micturition, by F. J. F. Barrington. This is a very elaborate paper, in which the author first describes the peripheral nerves to the bladder in the cat. It is illustrated by many figures and some X ray photographs of the bladder after filling the bladder with a warm 20 per cent. solution of colloid silver. The cats, all females, were anæsthetised. The tonic influence of the nervous system on the bladder and urethra is described and experiments are cited. Reflex micturition and interference with micturition by nervous lesions are next described. It appears that in the cat micturition is a highly specialised act. The bladder is relatively very large, and micturition occurs infrequently—once or twice in 24 hours—and urine never escapes from the urethra apart from micturition. The effects of division of the peripheral nerves, division of the sacral posterior dorsal roots, transection of the cord between the seventh and twelfth thoracic roots, were then studied, and finally the mechanism of closure of the urethra. It is generally stated that micturition is dependent on the integrity of a centre in the lumbo-sacral region of the cord and on the connexions of this with the bladder and urethra, and that micturition takes place when this part of the cord is isolated from the parts of the central nervous system above it. In the cat after division of the sacral posterior roots micturition is permanently abolished. There seems to be no mechanism for this coördinate act existing below the lower thoracic region.—M. Dresbach describes an Improved Form of Apparatus for Perfusion of the Excised Mammalian Heart.—The Motor Areas and Pyramid Tract in the Canadian Porcupine, by Sutherland Simpson. In a historical introduction the author briefly describes the course of the pyramid fibres in the primates, carnivora, ungulata, cetaceæ, marsupialia, insectivora, cheiroptera, and rodentia. Six full-grown porcupines were used for his experiments. After being anæsthetised the position of their cerebral motor areas was determined, and then the results of a typical extirpation experiment are discussed. In the porcupine there are four pyramidal tracts entering the cord—the crossed dorsal pyramid tract, the crossed lateral pyramid tract, the direct dorsal and the direct ventral pyramid tracts.

Brain: a Journal of Neurology. Edited by HENRY HEAD, M.D., F.R.S. Vol. XXXVI., Part 2.—This number appears soon after the last, and it contains four papers of much interest. The first is by C. T. Van Valkenburg, on the Corpus Callosum, with experimental and pathologico-anatomical researches on this part of the brain. The reader interested in the subject must be referred to the article, which does not easily lend itself to abridgment.—Dr. Saunders contributes an article on the Sensory Changes in Friedreich's Ataxy, in which he shows clearly that sensory changes, slight but distinct, are much more common in the disease than has hitherto been recognised.—The third article by Dr. Fildes and Dr. McIntosh is on the Application of the Wassermann Reaction to Neurology, and the technique described is well worth the careful attention of all neurologists.—The fourth article on the Bulbar Nuclei, with special references to the existence of a salivary centre in man, has already been the subject of an annotation in these columns. The present number of *Brain* is quite up to the high standard we have been taught to expect from this journal.

American Journal of Roentgenology.—We note that the American Roentgen Ray Society has decided to issue its official publication as a monthly periodical instead of quarterly as formerly. It has seemed, in a country where radiology has made such rapid and brilliant strides, more or less anomalous, that no monthly journal should be forthcoming, and in congratulating the society upon their courage in filling this gap in current medical literature we may express the opinion that the step is one that has every prospect of success. The monthly issue began in November last under the editorship of Dr. P. M. Hickey, of Detroit,

[1] Quarterly Journal of Experimental Physiology, vol. vi., 1913, and THE LANCET, June 14th, 1913.

with Dr. F. C. Zapffe, of Chicago, as associate editor. The first number is a memorial to the late Dr. Lester Leonard, one of the most recent martyrs to the baneful influence of the X rays, and to whose untimely death we had occasion to refer in these columns. It will be remembered that Dr. Leonard was selected as chief reporter on the radiography of the stomach and intestines at the International Congress of Medicine in London last August, and his report forms the chief part of this number.—In the November issue there are papers on the Treatment of Uterine Fibroids and other Gynæcological Conditions, by Dr. A. F. Holding and Dr. G. E. Pfahler, among others. The new X ray tube is described by the inventor, Mr. W. D. Coolidge, and some notes on its practical application are given by Dr. Lewis Gregory Cole in the January number.—In the February issue there is an interesting contribution on the Possible Relation between the Pituitary Gland and Epilepsy, by Dr. G. C. Johnston, of Pittsburg. These are only a few of many interesting and valuable articles to be found in this valuable journal. Several of a more technical character but of the highest importance to radiologists are also given; these deal with such questions as X ray measurement, management and control of X ray tubes, the use of intensifying screens, and other subjects of a similar nature. The journal is printed on a specially good paper with a clear type that is a pleasure to read. The excellence of the illustrations calls for special comment. They are from half-tone blocks, in the preparation of which a very fine screen has been used, with a final effect that is very pleasing. We also notice that many of these are the same as the original negatives, in that the bones, for instance, are white, not black as in a print or other reproduction. If this can be done with less, or at least no more loss of fine details than in the more usual reproductions, it is probable that the change will be welcomed by radiologists who are accustomed to examine the original plates. The innovation is a noteworthy one, and it will be interesting to see how far it will become popular. This journal can be recommended to radiologists, who will be well advised to include it among those they receive regularly.

British Dental Journal.—The issue for April 15th contains a thoughtful paper by Mr. Alan Forty on Some Ideals of Surgery in Dental Operations. He points out that many operations on the teeth are carried out with a total disregard of their effects on the tissues and their probability of causing sepsis.—There is a paper on School Dentistry, by Mr. C. F. Moxley, in which he gives a record of the work carried out at the Birmingham School Dental Clinics. Over 16,000 extractions were carried out, a little less than one-fifth being under anæsthetics, and over 8000 teeth were saved by filling.—Mr. Hopewell Smith records a case in which the left maxillary canine erupted posterior to the second premolar.

LONDON HOSPITAL MEDICAL COLLEGE (UNIVERSITY OF LONDON).—A course of lectures on tuberculosis will begin at this hospital on Monday, May 11th, and will continue during the summer session.

ROYAL MEDICAL BENEVOLENT FUND GUILD.—The fourth annual general meeting of this guild was held recently in the library of University College Hospital Medical School, Viscountess Bryce in the chair. Dr. Mary Scharlieb, honorary treasurer, submitted the balance sheet, and strongly urged the needs of the educational fund which aims at enabling children who are beneficiaries to make a good start in life. In the absence of Lady Tweedy, chairman of council, the annual report was read by Sir John Tweedy. The report states that the formation of new branches, the increase in the number of subscribers, and the keenness with which the work is carried on are highly satisfactory. The objects of the guild are to help the Royal Medical Benevolent Fund by obtaining additional subscriptions to that fund and by making it more widely known; also to assist distressed members of the medical profession, their wives, widows, and families, who are beneficiaries of the Fund, by personal service, provision of clothing, and help in other directions. The adoption of the report and balance sheet was moved by Lady Bryce, seconded by Sir Rickman Godlee, and carried unanimously.

Reports and Analytical Records
FROM
THE LANCET LABORATORY.

LAXAMEL.

(MESSRS. BURROUGHS, WELLCOME, AND CO., SNOW HILL BUILDINGS, LONDON, E.C.)

Laxamel is an almost transparent jelly containing, according to our analysis, as much as 68 per cent. by weight of pure liquid petroleum. This amounts approximately to 80 per cent. by volume. It is quite pleasant to take and is attractive in appearance. Further analysis showed the presence of 11·63 per cent. of sugar and 6·6 per cent. moisture. There was no appreciable quantity of mineral matter present. The combination is designed for the use of patients who have a difficulty in taking raw oil, and it provides, of course, the well-known laxative effects of petroleum.

BIOMALZ.

(MESSRS. PATERMANN BROS., REGENT HOUSE, KINGSWAY, W.C.)

Biomalz is a fluid malt nutrient reinforced with the addition of calcium glycerophosphate. It presents all the nutritive properties of a well-made malt extract. Thus, besides containing malt sugar, there is present also a noteworthy proportion of soluble proteins. According to our analysis the total proteins amounted to 4·26 per cent. This is slightly in excess of the amount of protein contained in milk. Further examination gave the following results: Moisture, 37·83 per cent.; mineral matter, 1·48 per cent.; malt sugar, 44·44 per cent.; and dextrin, 11·99 per cent. In addition to phosphate of potassium always found in malt extract the presence of glycerophosphate of lime was established. On removing the ordinary phosphates with lime water glycerophosphate was found in the filtrate. The preparation is an easily digested food, while the presence of glycerophosphate supplies an approved aid to healthy nutrition.

ISTIN.

(THE BAYER COMPANY, LIMITED, 19, ST. DUNSTAN'S-HILL, LONDON, E.C.)

Istin is described as a synthetic laxative which is closely related to the active cathartic principle of rhubarb or senna. It occurs in the form of yellowish brown tablets containing from 2½ to 7½ grains. A characteristic chemical reaction of istin is the production of a crimson colour with ammonia. It is stated that the action of istin is entirely confined to the large bowel and consists in the stimulation of peristalsis exclusively in that region. It is reported to assist after one dose in restoring normal action.

THE CHANCELLOR GENUINE PURE GRAPE BRANDY.

(MESSRS. H. R. WILLIAMS AND CO., 6, LIME-STREET, LONDON, E.C.)

We have submitted this brandy to analysis, and the results support the claim that it is a pure grape spirit. It is a brown brandy with a matured flavour. Although not produced in the Cognac district, it possesses similar characteristics to the products of the Charente. It is mellow and free from crude products. It contains according to our analysis a maximum of ethers—namely, 105 parts per 100,000 parts of alcohol present. Doubtless its peculiar fragrance is due to some extent to these

and allied bodies. Other secondary products were as follows: aldehyde 10·70, furfural 0·54, and higher alcohols 217 parts per 100,000 parts of alcohol. The strength of the spirit amounted to 46·59 per cent. of alcohol, and the total extractives were 0·65 per cent. The acidity of the brandy was inappreciable. It comes well out of comparison with the matured spirit produced from wine distilled in the Cognac district.

SECWA.

(CASEIN, LIMITED, BATTERSEA, LONDON, S.W.)

We find that secwa is correctly described. It is a yellowish-white powder obtained from whey by a special process which, while eliminating the water, leaves the product "live." That is to say, the enzymes are not killed and the milk albumin is not coagulated. Thus a solution of secwa in water on the addition of a little acid gives on heating an abundant coagulum of milk albumin. This, of course, is a valuable protein constituent of milk, and the occurrence of it in a relatively larger quantity in human milk is said to account for the increased digestibility of human milk compared with cow's milk in infant feeding. Our analysis of secwa gave the following results: Moisture, 2.00 per cent.; mineral matter, 9·00 per cent.; milk albumin, 14·50 per cent.; milk sugar, 74·50 per cent. There were only traces of fat present. Secwa is a sound preparation on scientific lines and should have obvious uses in special dietetics.

HEXANATRIN.

(MESSRS. CORBYN, STACEY, AND CO., LIMITED, BRUNTON'S WHARF, 673, COMMERCIAL-ROAD EAST, LONDON, E.)

Hexanatrin is a definite crystalline compound of hexa-methylene-tetramine and acid sodium phosphate. The idea of introducing acid sodium phosphate is to increase the acidity of the urine so that a maximum of latent formaldehyde is set free from the amine. There is thus claimed for the compound an increased power of killing infection. In other words, it is more active and rapid in its action used as an urinary antiseptic than hexa-methylene-tetramine alone.

STERILISED NATURAL MILK.

(NESTLÉ AND ANGLO-SWISS CONDENSED MILK COMPANY, 6 AND 8, EASTCHEAP, LONDON, E.C.)

We found the specimen of this milk which was submitted to us to be in excellent condition and perfectly sweet and fresh tasting. There were no preservatives present, and the milk kept sound for several days after opening. Its composition according to our analysis was as follows: Fat, 3·57 per cent.; casein, 3·68 per cent.; milk sugar, 4·75 per cent.; mineral matter, 0·70 per cent. This analysis evidences good quality, and the milk when taken from the tin was a perfectly homogeneous fluid with no trace of separated solids.

KING EDWARD'S HOSPITAL FUND FOR LONDON.

THE annual meeting of the Governors and General Council of King Edward's Hospital Fund for London to receive the accounts and the report of the General Council for the year 1913 was held at St. James's Palace on April 30th, when the Duke of TECK presided.

Lord ROTHSCHILD, the honorary treasurer, in presenting the account of receipts and expenditure and the balance sheet for the year ending Dec. 31st, 1913, said the total investments of the Fund now exceeded £2,000,000.

The Duke of TECK moved the adoption of the accounts, and the resolution, having been seconded by Lord IVEAGH, was carried unanimously.

Sir SAVILE CROSSLEY, the honorary secretary, presented the draft report of the Council, which stated that the total receipts for the year 1913 were £187,704 18*s*., made up as follows: donations, £5810 0*s*. 6*d*.; contributions to capital, £2346 7*s*. 10*d*.; annual subscriptions, £26,187 17*s*. 9*d*.; contribution of the League of Mercy, £14,000; from the Lewis estate, £9092 4*s*. 3*d*.; legacies, £48,022 1*s*. 3*d*.; interest from investments, including property not yet transferred to the Fund, £82,046 6*s*. 5*d*.; together with £200 from the trustees of the Bawden Fund. The amount distributed was £157,500, being the same as in 1912. Of this sum the hospitals received £151,000, while the remaining £6500 were distributed amongst consumption sanatoriums and convalescent homes taking London patients. The £151,000 allotted to the London hospitals was directed to be applied as follows: £109,350 to general purposes and maintenance, £6000 towards the liquidation of debts on maintenance account, £1500 to an amalgamation scheme, and £34,150 for additions and improvements to hospitals and their equipment. Of the £6500 given to consumption sanatoriums and convalescent homes, £3800 were allotted in consideration of the allocation of beds for patients to be sent from certain London hospitals. His Majesty the King had continued his annual subscription of £1000, while Queen Mary, Queen Alexandra, the Prince of Wales, and many other members of the Royal Family had also liberally supported the Fund. The list of contributions included annual subscriptions of £5000 from Mr. Walter Morrison, £4000 from the Drapers' Company, £1000 from Mr. William Waldorf Astor, and £1000 from the Merchant Taylors' Company, besides three anonymous donations each of £1000. The legacies received during the year included £25,000 from Sir Julius Wernher, £8471 6*s*. 4*d*. on account of the bequest of Lord Lister, £6000 from Mrs. Batchellor, £4622 19*s*. 4*d*. from Sir William Dunn, Bart., and £1000 from Mrs. Emma James. In addition to the legacy of £25,000 from the late Sir Julius Wernher, the Fund received securities to the value of £269,644 7*s*. 2*d*., being a first instalment of his further legacy left to the capital account of the Fund of one-twelfth of the residue of his estate. A bequest from the late Mr. A. H. Harman, consisting of ground rents amounting to £1382 3*s*. per annum, was in course of transfer to the Fund at the end of the year. The total amount received in donations and subscriptions as compared with 1912 showed, excluding contributions to capital, a decrease of £5154. Legacies, however, showed an increase of £36,584 9*s*. 9*d*. as compared with 1912, or of £9352 14*s*. 5*d*. as compared with the average of the five years 1908 to 1912. The annual statistical report on the expenditure of London hospitals during 1912, issued in August, 1913, showed that the cost of working at hospitals had increased since the previous year by about £22,000.

The Duke of TECK, who moved the adoption of the report, read a letter from the King deploring the loss sustained by the death of Lord Strathcona and other benefactors of the Fund, and referring also to the deaths of Sir Trevor Lawrence and Sir Julius Wernher, the munificent bequest of the latter of whom would, by increasing the permanent income of the Fund, do much to ensure the annual distribution against the danger of possible reduction which seemed a year ago to be threatening.

The SPEAKER of the House of Commons seconded the motion, which was carried unanimously.

Sir WILLIAM CHURCH, chairman of the Distribution Committee, moved the adoption of a report of that committee upon the amalgamation of the Hospital for Diseases of the Throat, Golden-square, and the London Throat Hospital, Great Portland-street. The committee recommended that out of the grants of £20,500 promised and set aside for a general amalgamation the following grants be made and promised towards the present partial scheme—namely, a capital grant of £10,000 and an annual maintenance grant (subject to the usual annual inspection) of £900 a year for five years.

The motion was seconded by Mr. FREDERICK M. FRY and carried unanimously.

Other business having been transacted the meeting terminated with a vote of thanks to the chairman.

THE LANCET.

LONDON: SATURDAY, MAY 9, 1914.

The Budget and the Medical Profession.

THE Chancellor of the Exchequer made his Budget statement in the House of Commons on Monday last and revealed a financial condition of the country that has been realised with mixed feelings, the enormous value of the national resources being counterbalanced by the unprecedented demand upon those resources. We do not attempt to analyse his statement from the standpoint of the financier or the statistician, but propose only to call attention to the features of it which must have particular interest for our readers in the medical profession. How far Mr. LLOYD GEORGE'S intentions are instinct with wide-eyed patriotism and how far they are the offspring of deliberate attempts to win the support of the many by the exploitation of the few can be learned from the columns of the daily press. But if we read the press of one party we learn one thing, and if we read the press of another party we learn another thing, and the net result of such clarification of Mr. LLOYD GEORGE'S alleged obscurity is not informing.

There are designs in the Budget statement which are sure of the approval of the medical profession whatever the party politicians may say of them. The proposal that further and substantial aid should come from the Exchequer to mitigate the burdens put upon local authorities, in their attempts to meet the obligations incurred under legislation to carry on local government, will be regarded by fair-minded people as a move in the right direction, and will receive the endorsement of sanitary authorities. They will be in no trouble to criticise the methods introduced for raising the sums of money required in the indicated direction; it is a case of *non olet pecunia*. The finding of substantial sums, amounting in all to £1,250,000, in aid of the work of the National Insurance Act, will be approved as a whole. The establishment of local clinics to assist panel practitioners, the organisation of health lectures, and the control of malingering (which will require very discreet management), are legitimate outcomes of the working of the Act. That expenditure in suppressing cattle disease should be borne by the Exchequer will seem just, knowing with what difficulty this expenditure has sometimes been met by some localities; and it is good to learn that certain laggard or impoverished counties will be assisted to discharge their duties under the Mental Deficiency Act. The additional contribution from the State towards the maintenance of proper machinery for the promotion of national health and the well-being of the community will be welcomed. The intention will be applauded to provide local authorities with assistance in their endeavours to clear slums and provide better housing accommodation, to deal with the tuberculosis problem, to train an adequate supply of nurses, and to set up laboratories in which can be reinforced the efforts of medical men desirous of fighting disease in a scientific manner. These things are an adjunct to, or an elaboration of, the plans advocated by all our sanitarians; and however the money is raised, so long as the mere raising of it does not paralyse efforts of equal or greater value to the community, we must welcome such projects.

But members of the medical profession have to regard the Budget from the business point of view. As citizens they will take a substantial share in the burden of finding the money whose destination is so worthy. The new graduation of the income-tax in each of its forms cannot be other than irksome to the medical profession. Earned incomes up to £1000 are not interfered with, but from that point the figures are: £1000 to £1500, 10½*d.*; £1500 to £2000, 1*s.*; £2000 to £2500, 1*s.* 2*d.*; £2500 to £3000, 1*s.* 4*d.*; above £3000 and on all unearned incomes, 1*s.* 4*d.* Thriving medical men in every branch of the profession will be affected by the imposition of the higher rate, anyhow between £1000 and £2000; while the raising of the tax on unearned incomes from 1*s.* 2*d.* to 1*s.* 4*d.* will fall particularly hard upon them as investors, because the investments of medical men almost invariably represent their earnings and not their inheritance. The lowering of the line at which super-tax has to be paid, from £5000 to £3000, may only catch the very successful class among us, but hitherto most of these have escaped. The fact, however, that the first £2500 of these large incomes will be exempt from the charge will mitigate the circumstances to the majority of those affected. The medical profession is as ready to pay a high price for a proud citizenship as any section of the community, but it would not be difficult to show that this country is steadily becoming a very expensive one for the professional man. His burdens grow.

The Narrow Way to Medical Research.

THE reports of the Royal Commission on University Education in London, Mr. ABRAHAM FLEXNER'S Report on Medical Education in Europe, Sir WILLIAM OSLER'S pronouncements on several occasions, and articles in our own columns have of late in different ways brought the academic ideal in medical education to the forefront, and the consideration of it has brought forth many weighty documents. An outstanding principle, that the teaching of a subject such as medicine in all its branches is inextricably bound up with continued

research into the scientific problems that progressively unfold themselves, is now fully recognised and is acted on so far as the underlying sciences, both physical and biological, are concerned, but it is not so generally conceded that the same is equally true with regard to medicine itself.

But clinical research can be carried out properly only in an adequately fitted hospital with the necessary laboratory accommodation attached. In this country great public hospitals have for their objective the treatment and care of the sick individual, upon which clinical teaching has in process of time become engrafted by men whose ultimate aim has always been a distinguished career in practice. That up to a certain point these men have nobly fulfilled their secondary task of medical education is amply shown by the general high average standard of competence of the entire body of the British medical profession. That they have further contributed largely—very largely—to the extension of the domains of medical science the history of medicine amply testifies. But as conditions change so must we change with them, and the foreign possessions, so to speak, of the empire of medicine have now become so extensive that they can no longer be administered by those who sit at home. A new race is demanded which shall go forth into the new possessions, leaving old ties, old familiar aims and pursuits, and the life of the old-established communities behind, there to continue and extend the work in entirely new surroundings and by other means.

The need *for* an extension of medical research being admitted, what are the needs *of* medical research? This question has recently received an exposition and a suggestive answer in a weighty communication to the *Morning Post*.[1] Therein an anonymous writer, under the pseudonym of "Junior" (whose identity, however, may be shrewdly suspected by those who can read the internal evidence of authorship between the lines), speaking from an experience of ten years' engagement in medical research, for six of which it has been his chief object in life, lays down that the primary function of the research worker in medicine "is to supply the practising hygienist and physician with new knowledge of disease; to advance the science of prevention and the art of practice by the whole means in his power." He seeks; finding, he teaches; he teaches the facts he finds; he shows how his new facts link with older knowledge. There ends his task. The very temperaments required respectively for research and practice are opposed—though in rare instances, it is true, they are found combined in a single individual. For the researcher the spirit of hesitancy, of careful and prolonged questioning, of checking, if need be retracing, his steps is imperative, for thus alone will he avoid the pitfalls of premature conclusion. For the practitioner, on the other hand, that way madness lies. For him in most cases the paramount duty is to act—to apply promptly the knowledge he has acquired, groping his way only when he must, cutting across country, relying on his knowledge of the roads when he can, even on his instinct if necessary, so that he may arrive at his destination in time.

The obvious inference is that medical research, in place of being a subordinate occupation, a sort of apprenticeship for certain junior members of the profession, as is the frequent case at present, should constitute a career in itself; it should be an introduction not to practice, but to further research and to special teaching, calling for particular training and intensive study, an intimate knowledge of technique, and above all encyclopædic acquaintance with relevant facts garnered by the allied sciences. If that course were pursued the articles in medical publications would teem less frequently than at present with statements contradictory of settled physiological or physical teaching. At present such workers are for the most part young men on the waiting list of the various hospitals; consequently they have no wards in which to study, for these are all in the hands of their seniors, who have attained or are well on the road to an objective altogether different from that of research—viz., lucrative practice. If research is to have a chance, either teaching hospitals must set apart research wards or special institutes must be provided for research workers. In this connexion it is worth remembering, as "Junior" points out, that a wealth of material goes to waste in the Poor-law infirmaries of London alone, where there are thousands of patients on whom no observations are made. It would be difficult to sum up the whole subject more tersely and yet more forcibly than "Junior" does when he says: "Choose the workers rather than select their work; give them a fair competency; engage them half time or full time as you will; supply their requests for equipment, material, and assistance. They will do the rest." And all experience shows that if care is taken in selecting the men they may be relied on to do it.

[1] Research in Medicine, its Position and Needs, Morning Post, April 25th, 1914.

Some Modern Theories Concerning Hysteria.

A PERUSAL of Dr. J. A. ORMEROD'S scholarly Lumleian lectures on Some Modern Theories Concerning Hysteria[1] awakens various lines of thought, a consideration of which may be said to exercise both a stimulating and a sobering influence on the mind. On hysteria, as on the whole question of the psychoneuroses, attention in these days is being focused: the problem of their nature and pathogenesis is being attacked with renewed ardour, and that, too, from widely diverging standpoints. The mere fact of this renewal of investigation is an indication of underlying dissatisfaction with the conflict and rivalry of views of hysteria that

[1] THE LANCET, April 25th (p. 1163), May 2nd (p. 1233), and present issue (p. 1299).

have hitherto held the field. Even a definition of hysteria to command general acceptance is not yet forthcoming. Yet it is one of the most ancient of diseases; the student of literature and of history can adduce evidence to prove that its symptoms were known before the dawn of our era; while the student of art can point to mosaics, bronzes, and manuscripts, dating as far back as the fifth and sixth centuries, in which characteristic hysterical features are portrayed. Through the Middle Ages hysteria leaves a trail behind it of ghastly misconceptions and of fatal mistakes in diagnosis.

And if to-day the sufferer from hysteria is assured of sympathetic handling, can it be alleged with truth that this is a sequel to greater insight into the mystery of the disease? For all our familiarity with it, no one seems to know where it begins and where it ends: there appears to be finality neither in theory nor in symptomat logy. Even the classical stigmata on which the student was wont to depend, and thereby to crystallise his conception of the malady, seem to be vanishing. Dr. BABINSKI assures us that he never meets with hemi-anæsthesia now, while he secures a kinematographic record of *la grande crise hystérique* in case it may possibly prove one day of historical interest. If what Dr. ORMEROD calls the palmy days of hysteria at the Salpêtrière are gone for ever, and the hysteria of CHARCOT is obsolete, will the same be said in days to come of the hysteria of FREUD? Listerism has banished hospital gangrene, which survives merely in name, and we are informed by syphilologists that, for instance, rupia and syphilitic cranial osteitis are now rarities. Advances in medical knowledge and consequent improvement in therapeutic technique have definitely altered the manifestations of certain organic diseases. Has, then, hysteria also changed its guise, and are its once familiar features no longer recognisable? We take leave to doubt it. For those whose mental vision is not distorted by what happens to be the vogue of the moment in hysteria it is a pleasure to follow Dr. ORMEROD'S able guidance through the maze of hysterical symptoms, and a delight to note his apt modern illustrations of many of these, which the "advanced" theorist would have us discard altogether. Some of the high priests of the latest cult are as intolerant of what is in their eyes heterodoxy as were their mediæval predecessors, whose *flair* for hysteria still amazes us. It is not so much, we suspect, that hysteria has changed, as that the twentieth century Parisian or Viennese, or the Londoner for that matter, has moved away from his forebears in psychical "make-up" and in reaction to his environment. Hysteria is many-sided, and if certain aspects of its symptomatology are for the time being in greater prominence than others, this only means that it has turned its facets in response to the light of research thrown on it from a new direction.

Man has theorised on the nature of hysteria from the days of belief in demoniacal possession to those of what might not unfairly be described as pan-sexuality. The literature of hysteria is strewn with the wrecks of theories long since forgotten, as are the very names of their authors. Has the disease not been regarded by one as an affection of the ductless glands, and by another as a sort of secondary sexual character? The same fate, we are afraid, will befall other theories that are but of yesterday. Perhaps the reason may be found in the words of old JOHN WYNTER: "The learned physicians, who observed and followed Nature, painted to the Life, in breathing Images, what their Eyes had seen, and their Fingers felt: whereas the Moderns first frame a System or Hypothesis, and then all Appearances must warp to their Whims, and bow the Knee to the Idol their Brain has set up. Hence some by sinking beneath, and others by soaring above the Works of the great Creator, become rather *Ignes fatui*, than true Lights to the Paths of Physic."

Leaving aside certain theories after brief allusion to them, Dr. ORMEROD concentrates attention on those associated with the names of Professor PIERRE JANET and Professor SIGMUND FREUD, and if, on the whole, as we think, it is the theory of the former which appeals to him, Professor FREUD'S wonderfully profound investigations into the problem of hysteria are neither underestimated nor unappreciated. At the same time, the lecturer's keen critical spirit leads him to outline various objections to which they are open and which deserve serious and unbiased consideration. Dr. ORMEROD has little patience for the *Sexualitäts-schnüffelei* of the exuberant Freudian; if it is ridicule that kills, it is a sense of humour that saves; and could some of the Freudian school show even traces of the latter they would not expose themselves so fatally to the former. Of the literary charms and graces of the lectures we need say no more than that they are wedded to a ripe scholarship; in these essays Dr. ORMEROD has given us of his best.

RÖNTGEN SOCIETY.—The annual general meeting of this society will take place on June 9th, when an exhibition will be held and several lantern demonstrations given. Members desirous of showing new apparatus, negatives, or lantern slides are requested to communicate with the honorary secretary, Dr. Robert Knox, 7, Harley-street, London, W.

MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.—The next general meeting of this association will be held at 11, Chandos-street, Cavendish-square, London, W., on Tuesday, May 19th, at 3.15 P.M., under the presidency of Dr. James Chambers. A paper will be read by Dr. A. Helen Boyle, entitled "Some Observations on Early Nervous and Mental Cases, with Suggestions as to Possible Improvement in our Methods of Dealing with Them." Members will dine afterwards at the Café Monico at 6.45 for 7 P.M. The cost of dinner, exclusive of wine, will be 5*s*. Morning dress will be worn. The annual meeting of the association will take place at Norwich on Tuesday and Wednesday, July 14th and 15th.

Annotations.

"Ne quid nimis."

THE STATE, THE MOTHER, AND THE CHILD.

As we recently stated in a leading article under this heading, the movement towards more definition for the work which the State can undertake on behalf of the mother and the child is receiving an encouraging reception from the Government. But in view of some misinterpretation which has obviously taken place of the intentions of different Government departments, we think it well to point out that the Board of Education have assuredly no intention of undertaking any work which at present devolves upon the sanitary authorities. The Board have for some time been making grants to schools for mothers and similar agencies, and they hope to be in a position to increase the grants in aid to institutions of this nature with a view to developing such work, making it more educational where desirable, and linking it up with the School Medical Service which begins its operations at the time the child enters the school—that is, from 3 to 5 years of age. The promises of the Budget statement may here be borne in mind. In such endeavours the Board will continue as heretofore to encourage and foster coöperation in each area between the sanitary authority and the local education authority and their various officers. Where the medical officer of health is also school medical officer, no difficulties have been found to arise; and where the two offices are held by different persons there is now, as a rule, effective and cordial coöperation. The point is that the Board of Education have never proposed undertaking work in connexion with the prevention of infant mortality, which devolves upon the sanitary authority, nor is there any proposal such as has been suggested in the lay press that the Board should undertake the establishment or control of maternity clinics dealing with the mother as distinct from the child.

DEATH FOLLOWING THE EXTERNAL APPLICATION OF KEROSENE.

PARAFFIN oil is a popular and efficacious agent for the destruction of pediculi. That it must not be used carelessly is shown by the following case reported in the *Australian Medical Journal* of Feb. 7th by Dr. J. K. Adey. A man, aged 73 years, had been in an asylum for three years in consequence of senile dementia. An attendant noticed some vermin in the axillæ, into which he swabbed, but did not rub, kerosene. Some of the liquid ran down the patient's sides into his groins. The kerosene was not washed off and the patient was clothed in a flannel, a shirt, and outer garments, and was seated in a chair in the sun. Seven hours afterwards he was seen by one of the medical officers in a collapsed condition. Large raw surfaces extended from the axillæ to the groins and there was a raw surface in the lumbar region about 4 by 6 inches. Some of the kerosene evidently had run behind his back. The condition was one of superficial burns for which he was at once treated, but he gradually sank and died three days later. It is remarkable that kerosene, which is frequently used as an external application, should have caused such rapid denudation of the skin. The cuticle had peeled off the affected areas. The severity of the result was probably due to the clothes being put on over the kerosene, which prevented free evaporation and the heat of the sun seemed to have aggravated the effect. There seemed no possibility of the kerosene being contaminated as it was drawn directly from the tin supplied by the dealers. A light could not have been set to it as the clothes were not burnt. The necropsy showed that there was no internal lesion and that the patient, considering his age, was in good physical state. Cases in which kerosene has caused reddening of the skin are not infrequent, but a case of death due to its application is so rare as to be of medico-legal importance.

THE STERILISATION OF MILK BY ELECTRICITY.

WITH regard to the interesting investigations which have been carried out for some years in the Thompson Yates laboratories at the University of Liverpool, in connexion with the possibility of sterilising milk by electrical treatment, some important conclusions have now been reached which are published in a report issued last week by Professor J. M. Beattie, the city bacteriologist. It appears that four main lines of investigation were pursued, which were as follows: 1. The effect of uni-directional currents on milk was tried, when it was found that not only did sterilisation not occur under the conditions of the experiments, but that profound changes were produced in the constitution of the milk. 2. The effect of uni-directional and slowly alternating currents with the addition to the milk of minute quantities of salt was next tested with the object of producing electro-chemical sterilisation. It was found that sterilisation could be brought about by this method, and inoculation of the treated milk showed that the bacillus tuberculosis was destroyed. The milk treated in this way was, however, spoiled from the consumer's point of view, on account of profound changes in the milk, and after many attempts to overcome these disadvantages this method was abandoned. 3. Next was tried the effect of static charges of electricity across a moving film of milk, but no appreciable effect was produced on the bacteria. 4. The effect of using a rapidly alternating current was finally tried, and this proved to be the starting point of a system which was ultimately adopted, for even in the early stages of the work with this method it was shown that the bacterial content of the milk could be reduced to a minimum and that the chemical constitution of the milk was apparently unimpaired. A "lethal apparatus" was ultimately designed, and the next points determined were whether the apparatus could be used for large quantities of milk, and whether its efficiency could be maintained over longer periods than those in which it had been ordinarily employed. In the former experiments we may point out that about 2 litres of milk were passed through the lethal tubes in four minutes—that is to say, at the rate of nearly 7 gallons per hour. With, however, a "non-stop" run of from 1 to 1½ hours 9 gallons of milk were treated and the results were quite as satisfactory. It was at this stage that a report was presented to the health committee in which it was stated that "the invariable result" was the "complete destruction of all colon bacilli and bacilli of similar nature with an enormous reduction in the total number of the bacteria of all

kinds." It was further reported that when tuberculous milk was used the bacillus of tuberculosis was destroyed. The results of chemical analysis were also satisfactory, and feeding experiments (on kittens) have shown, so far as they have gone, that the nutritive value of the milk is not impaired. A larger scale plant was then installed dealing with upwards of 100 gallons of diluted milk distributed in about 3000 bottles. A system of bacteriological control was instituted, and there appeared to be little doubt that a practical supply of milk free from pathogenic organisms was obtained. On the face of it these experiments would appear to be conclusive, and the results suggest that we are within reach of a process of milk sterilisation which can be applied to practical affairs. It is possible that a remedy for infected milk has been found. The importance of such a finding cannot be denied; but it is, of course, infinitely more desirable that our hands should be strengthened in the matter of a pure milk-supply, not so much in the direction of sterilising infected milk as of cutting off all possible sources of the infection itself. The discovery of a practicable and effectual sterilising process can never justify a relaxation of measures which insist upon a healthy cow and healthy milk. The obvious danger is that if this discovery should attain a wide practical application, the farmer may be encouraged to take the convenient view that preventive measures are not so necessary in view of a remedy having been found. The distribution of tuberculous milk, of course, cannot be justified on any ground. The report awaits confirmatory trials in other places, but we may point out that it contains no particulars as to the cost of the process, though we can hardly imagine that the authors would bring its advantages forward without having reckoned with economical considerations.

DIPHTHERIA AND THE HEART.

IN two directions may the heart evidence the effects upon it of the diphtheria toxin. There may occur sudden heart failure, and short of or preceding this there may arise disturbances of rhythm. Upon both these points recent observations have been made. W. G. MacCallum, in the *American Journal of Medical Sciences* (1914, vol. cxlvii., p. 37) approached, as he has on other occasions other questions of cardio-pathological interest, from the experimental point of view. He instituted a contrivance whereby the dog's heart and the work demanded of it could be controlled at will by variations of aortic pressure. He cut out, in this way, possible general vasomotor disturbing factors. Some hours before the experiment diphtheria toxin was given intravenously, and the animal was sick. It was found that the actual work of the diphtheria heart was at least as good as that of the normal heart, and this even against high pressure. When the diphtheria toxin was given in perfusion fluid, however, a certain feebleness and tendency to irregularity was noted, but the heart continued to beat long after signs of failure in the body of the dying animal, provided the pressure of nutritional fluid was maintained in the coronaries. The results seem to show fairly well that the death which occurs in the height of an attack of diphtheria is not exclusively the result of direct injury to the heart, although that may play some part in the process. On the question of the significance of the arrhythmia which arises in the clinical course of diphtheria, W. E. Hume in *Heart* (1913, vol. xxv.) has added some important facts. He studied in detail four cases, all in children. Three of them were fatal. But the interest lies in the unusually close similarity of the types of arrhythmia, and also in the order in which they successively arose. In some other respects, too, there was similarity of certain features. Thus, three of the cases were from the same school, and presumably infected from the same source; the duration of the illness was almost identical, death occurring on the thirteenth day in two, in the other on the fifteenth. There was also similarity of general clinical signs. The order of arrhythmia observed in three of the cases was this: (1) auricular extrasystoles; (2) nodal rhythm (synchronous auricular and ventricular contractions) occurring on the tenth day; and lastly (3) auricular flutter, a day or two before death in two of the cases; whilst in the third there arose attacks of paroxysmal tachycardia, a closely allied arrhythmia. Such a careful record of events, gained by polygraphic methods, may help to produce a more rational understanding of the significance and also prognostic value of the irregularities so often met with in diphtheria.

WOMEN'S WORK AND THE SHORTAGE OF NURSES.

AN interesting report upon the causes of the shortage of nurses in children's and fever hospitals was recently presented to the Metropolitan Asylums Board by the principal medical officer, Dr. H. E. Cuff. In response to inquiries as to the experience of other institutions, most of the general hospitals in London replied that there was no falling off in the number or social status of candidates for appointment. Most of the Poor-law infirmaries reported an experience of an opposite kind, and the reason appears to be that infirmaries and fever hospitals draw their recruits from the class which takes up nursing as a means of earning a living and has been attracted to fields of work in which they enjoy more personal freedom. The reports from Scottish fever hospitals were as satisfactory as those from English general hospitals; this was attributed to the fact that there were fewer openings for women in Scotland, and that the educational level was higher among them. Dr. Cuff commented upon the falling off in the number of women candidates for the teaching profession and the scarcity of domestic servants. Women, he said, were turning away from fields of work which were peculiarly their own to others where they obtained more freedom or where the outlook appeared less cramped. In spite of the hard work, 1948 candidates competed recently for 80 vacancies at the General Post Office; the number of women employed in the civil service or engaged in various forms of clerical work has risen from 72,048 in 1901 to 152,970 in 1911. There is a serious loss by emigration; in 1908 the number of women emigrants was 97,174; in 1912 it was 168,352. The fever hospitals also suffer, says Dr. Cuff, because trained nurses have now so many fields of employment—in massage and midwifery, as school nurses, health visitors, tuberculosis nurses, and the like—all of which must appear more attractive than life in an institution, especially a fever hospital. Apart from other disadvantages, fever nursing is regarded as a blind alley as far as professional advancement is concerned. Dr. Cuff states that the salaries at present offered by the Metropolitan Asylums Board are well above the

average, and that other conditions compare favourably, but the Board must be prepared to do more than is perhaps necessary in the provinces to attract women to its service, especially having regard to the severe competition in London from other hospitals and other forms of employment. Doubtless bearing in mind the difficulty of persuading local authorities to undertake extra expenditure, Dr. Cuff proposes a scale of increased salaries so moderate as to be, in our opinion, of doubtful efficacy. For probationers, to be accepted at 19 instead of 21 years, he has suggested a commencing salary of £20 a year instead of £18 as at present, rising to £22 instead of £20, with proportionate increases in upper grades and special increments of £2 a year after five and ten years' service. Better food and accommodation for nurses and two alternative schemes for granting extra leave are also proposed. The Hospitals Committee adopted the lesser of these schemes and approved the other proposals. On May 2nd the Board, practically without discussion—although in the interval since their first presentation the new arrangements have been subjected to considerable criticism outside—endorsed the action of the Hospitals Committee.

RIGHT-BRAINEDNESS IN RIGHT-HANDED INDIVIDUALS AND THE QUESTION OF "CROSSED APHASIA."

RIVAL theories of aphasia, whichever they be, have never yet succeeded in explaining those anomalous or "negative" cases of which a fair number of instances are now on record. Almost as many "negative" cases exist, which the theory associated with the name of Professor Pierre Marie fails to explain satisfactorily, as anomalous cases left unelucidated by the classical theory, cases to the solution of which Marie's theory was specially directed. Attention has recently, therefore, turned along rather a different line, and some prominence has been given to the possibility of variations in the localisation of the speech centres in different individuals. It is not intended thereby to depreciate the main and well-established facts of localisation, but merely to suggest that in certain otherwise inexplicable cases variations in the site of the speech faculty may be present. This view was tentatively advanced by more than one of the earlier writers on aphasia, but no instance of such variation that has been put on record can compare with one which has recently been worked out by Dr. Kurt Mendel, of Berlin, and published in the *Neurologisches Centralblatt* of Feb. 15th, 1912, and again, with further details, in the number for March 1st, 1914. The patient was a woman, aged 42, who was certainly right-handed, and in none of whose relatives had left-handedness ever been remarked. As the result of an embolus from cardiac disease she became paralysed on the whole of the left side, and had complete motor aphasia. The lesion was eventually found to be an embolic softening of the right inferior frontal convolution, the right island of Reil, and the right superior temporal convolution. Not content with a macroscopical examination merely, Dr. Mendel has made a microscopical investigation of both hemispheres, and is able to state that the lesion is as above mentioned; the left hemisphere is intact, and the pyramidal paths are normally crossed in the lower part of the medulla oblongata. The case therefore stands on record as one in which the motor speech centres are definitely placed in the right hemisphere in a right-handed woman. But as there was no trace of sensory aphasia in this case and no agraphia, the sensory speech centres must be localised in the left hemisphere, seeing that the right superior temporal gyrus was destroyed. In other words, the case is one of "crossed aphasia," one in which there is a proven dissociation of the motor and sensory speech centres. The importance of the case will be obvious to all who are interested in the problems of cerebral localisation. It is paralleled to some extent by another recent case recorded by Dr. E. Long,[1] in which the motor speech centres were proved to be on the right side, and the sensory speech centres on the left, in a left-handed patient. These and other cases suggest that differing degrees of right- and left-handedness exist, and that corresponding to the intermediate stages between absolute right-handedness and absolute left-handedness are possibly analogous variations in the complete or incomplete representation of the speech centres in one or other hemisphere. If this view is based on evidence which is not as yet very complete, at the least it has much to recommend it, and further investigations calculated to throw light on this important question will be awaited with interest.

ANTITUBERCULOUS VACCINATION.

IN 1913 Professor Maragliano published the latest results of his studies as to immunisation against tubercle by means of the antituberculous vaccine made by him at his institute at Genoa. Since then Dr. Eugenio Curti has performed 586 vaccinations of this kind, and gives his experiences of the method in a paper in the *Gazzetta degli Ospedali* of April 9th. Of the 586 persons vaccinated, about 5 per cent. gave no reaction of any sort either local or general, and these were for the most part robust individuals with good family history. The absence of reaction was attributable to special organic resistance, and not to any error in technique. In 80 per cent. there was sometimes, and after a few hours, slight aching in the arm, accompanied by tingling, and at the site of inoculation first a redness appeared, followed by a pustule which lasted some days, this being followed in its turn by a yellowish scab, which after falling left a hard nodule, and afterwards a dull red stain. These manifestations were accompanied by some local itching and a rise of temperature rarely exceeding 37·5°C., which was not always noticed by the patients, who merely complained of lassitude. This subfebrile state began about 24 hours after the inoculation when the pustule formed and lasted a couple of days. This took place in perfectly normal individuals. In about 15 per cent. there were pustules which assumed the dimensions of a halfpenny, and were accompanied with swollen axillary glands and a febrile reaction of 39°. These patients, however, did not complain of feeling ill, and were not prevented from following their occupation. The local manifestations lasted for ten days also in these cases. A further investigation into the condition and history of such patients showed that they were persons with a bad family history, or who lived with tuberculous people, or had some form of strumous manifestation, or were in such a poor state of health as to warrant the suspicion of a special predisposition to tubercle. When persons with

[1] L'Encéphale, June, 1913.

advanced tubercle were vaccinated in this way a strongly marked reaction occurred. It seems, therefore, practically certain that antituberculous vaccination is absolutely innocuous and is useful, moreover, in that it affords, by the intensity of the local manifestations, a criterion by which the greater or less resistance of the patient to tubercle may be judged. What will be the advantages derived from Maragliano's vaccination in the future remains to be seen. Certainly if it were the means of saving not more than 10 per cent. of those predestined to tuberculosis, it would be a victory to be proud of.

BLINDNESS, SMALL-POX, AND VACCINATION.

THE admirable work done by the United States in the Philippines in the practical stamping out of small-pox, though less spectacular than the elimination of yellow fever from Havana and the Panama Canal Zone, is nevertheless of the utmost value, not only for its immediate results, but in consequence of its demonstration of the efficacy of vaccination when thoroughly and radically enforced. It is well known that before the occupation of the Philippines by the United States small-pox was always endemic, and its exacerbations were frequent and severe. So far back as 1899 Dr. Llewellys F. Barker stated that when the American army first went to Manila it had a large mortality from small-pox, which was as common among the natives as scarlet fever or measles in America, a large proportion of the faces encountered being pitted. Wholesale vaccination by Dr. Bourns with the aid of 18 Filipino physicians had, however, entirely wiped the disease out. It has been for years rarely in evidence in the reports of the principal zymotic diseases in foreign places, published weekly in the United States Public Health Reports; the Report for April 3rd shows for the third quarter of 1913 only 15 cases, while the Report for the fourth quarter shows no cases and no deaths. This valuable official publication for March 27th, 1914, contains an authoritative account of a most interesting investigation regarding the prevalence and causes of blindness in Cebu. Twenty-three towns were visited, of which 12 reported blindness. In all 145 cases were examined, and the chief cause was found to be small-pox, 48 cases. Most of these small-pox cases had been blind for many years, only 3 having occurred in the past five years. The Report adds: "Since the Americans have begun the systematic and compulsory vaccination of all people small-pox is no longer a cause of blindness."

UTERINE ENDOSCOPY.

To the already formidable list of instruments for peering into the recesses of the human body Dr. Alfred Heineberg, a Philadelphia gynæcologist, proposes to add yet another. His preliminary announcement, in the April number of *Surgery, Gynæcology, and Obstetrics*, begins with a recitation of the means hitherto employed for the diagnosis of intra-uterine disease: bimanual palpation of the uterus as a whole, the uterine probe, digital exploration of the uterine cavity, and microscopic examination of curettings from the uterine mucosa. As he points out, the method of curettage, to which most importance is attached in the diagnosis of uterine cancer, yields valuable results, but often disappoints or misleads just in those cases where its help would have been most desirable. He has therefore designed an endoscope for visual examination of the interior of the uterus, consisting of an endoscopic tube, irrigating attachment, obturator, and lighting attachment. He has used it in about 20 cases, in all of which it was proposed to perform dilatation with curettement. By this means it is possible to see the lining membrane of the uterine body as of a velvety appearance and dark red colour. The slightest injury provokes bleeding. The cervical mucosa is pink or yellow according to its vascularity, and the arborising lines can be readily detected. He describes two cases in which facts of diagnostic value were brought to light by this method. In one a patient suspected of malignant disease was found to be suffering from villous endometritis. The other was a case of incomplete abortion; here uteroscopy discovered a piece of fœtal envelope adhering to the fundus, whence it was readily detached with small placental forceps. Hitherto Dr. Heineberg has carried out this procedure under general anæsthesia, but he thinks it will be possible to use local anæsthetics only in certain selected cases. Careful asepsis is, of course, as essential as in any intra-uterine procedure. Acute anteflexions, which might constitute a bar to inspection of the uterine cavity, may be overcome, he thinks, by careful dilatation of the uterine canal with bougies. Profuse bleeding is an absolute obstacle to the application of this method, a circumstance which, if it prove insurmountable, will greatly restrict the value of uterine endoscopy. Moreover, as Dr. Heineberg observes, incautious use of the instrument is capable of inflicting serious injury, especially in cases of acute infection of the genital tract, and in pregnant patients it would, of course, be absolutely inadmissible. It remains to be seen, therefore, whether a method which is subject to so many restrictions will yield information of sufficient importance to justify its application on any considerable scale. Whether or not, it is an interesting venture. The progress and manifold applications of the endoscopic plan of diagnosis during the past 50 years constitute a remarkable illustration of the psychological fact embodied in the popular saying, "Seeing is believing."

PATHOLOGICAL ANTAGONISM IN RELATION TO DIABETES.

IT is a clinical fact, to which, perhaps, too little attention has been paid, that one disease may appear to antagonise another. In this relation erysipelas may afford a striking example, an attack cutting short other conditions. The explanation of these facts is not at present known. There are other ways, too, besides that of one disease by its incidence obliterating the effects of another which demonstrate this antagonism. Thus one disease may replace another when the former is intermittent in incidence; or direct medical intervention, such as a surgical operation, may check an old-standing pre-existing disease, against which such intervention was not primarily directed. H. S. Stark in the *Medical Record* (1914, vol. lxxxv., p. 645) records some interesting observations in relation to diabetes. He recognises three groups in which pathological antagonism can be noted. (*a*) Where an intercurrent symptom checks the glycosuria. In two cases of diabetes an attack of urticaria stopped the excretion of sugar. More interesting than these, perhaps, was a case of diabetes in which the patient contracted syphilis. So long as the Wassermann reaction was positive the glycosuria persisted; when the negative reaction

occurred there was cessation of the excretion of sugar. A second case showed similar findings. (*b*) Where an intercurrent disease checks the glycosuria. In this relation he has noted the cessation of the sugar following the advent of pneumonia and also of typhoid fever. (*c*) Following operation, cessation of the sugar excretion. He comments, too, upon the supposed intimate connexion between pulmonary tuberculosis and diabetes. It is held that the diabetic is especially prone to succumb to phthisis. This view requires modification, but it is, conversely, a clinical finding that pulmonary tuberculosis itself appears to lessen the susceptibility to diabetes. Possibly in this connexion there is to be seen a similar pathological antagonism, the onset of tuberculosis in diabetes being explainable solely by the lowered vitality of the diabetic and not by any especial susceptibility which diabetes in itself confers upon the patient. Observations of this general character are favoured by long acquaintance with the patient. Such are not easy to make in general hospital work, and it is probable that additions to our knowledge would be more easily made by the general practitioner with his long individual familiarity with his patients rather than by the hospital physician.

NEURALGIA OF VENOUS ORIGIN.

Professor L. Edinger, of the Neurological Institute in Frankfort, deals with a little recognised, if not infrequent, condition in a recent number of the *Berliner Klinische Wochenschrift* (No. 11, 1914). Many differing morbid changes may produce neuralgic pains in the lower extremities, often grouped indiscriminately as sciatica, and the better acquainted the physician becomes with these the less likely is he, in practice, to meet with cases of neuralgia pure and simple, for the obvious reason that the underlying pathological state does not escape him. Insufficient examination is, however, only too prone to lead to failure in treatment if once so comprehensive a diagnosis as sciatica is made; content with that, the spirit of investigation seems to go to sleep. Professor Edinger describes several cases that have recently come under his notice with a ready-made diagnosis either of sciatica or of crural neuralgia; not the diagnosis, but the failure to effect a cure led to their being sent to him. Yet until the etiology was recognised therapeutic endeavour was necessarily fruitless. One of these cases was that of a healthy man, aged 22, who received a kick on the left shin just below the knee when playing football; unfortunately an iron firescreen fell on exactly the same spot not long after, with the result that, following on a severe local hæmorrhagic effusion, acute pains developed in the limb, on which eight weeks' rest in bed and numerous forms of treatment had little or no effect. For no less than three years the pains continued in spite of every attempt to relieve them. The patient was able to cycle for some distance, but the pains came on if he had to climb an ascent. He was able to ride on horseback, though pressing his knee against the horse's side induced the pain. He could walk upstairs quite well and always felt the pains worse if he stood for any time. The contradictory nature of the complaint, as it appeared to some physicians, had led to a diagnosis of hysteria. There were no signs of organic nervous disease. Professor Edinger noticed on examining the patient that some superficial veins over the calf were dilated, and the idea of a varicose condition of the veins of some nerve trunk, or in the neighbourhood of a nerve trunk, came to him. The simple application of an elastic bandage effected a speedy and permanent recovery. Another case was that of a medical man, aged 56, who, after a chill, developed so-called sciatica in the left leg. Yet the pains were worse on standing or sitting, while walking always relieved them. They were localised mainly on the back of the knee, but were felt also in the buttock; their frequent appearance at the head of the fibula led to a diagnosis of peroneal neuralgia, but this the patient himself would not accept, although it was clear that they began in that region. The whole leg below the knee ached, while pressure on the sciatic nerve at the sciatic notch was painful. The pains were always alleviated by walking upstairs and aggravated by standing or walking slowly. Every conceivable treatment for sciatica was at one or other time utilised, but without result. The patient, however, was one day examined in a standing and not a recumbent attitude, when small varicose veins were noted on the back of the knee and a diagnosis of deep varicose veins made. Treatment along suitable lines at once led to a satisfactory cure. The value of examination in a standing position is emphasised in all the cases here published by Professor Edinger. No doubt pain in association with varicose veins is familiar enough to the clinician, but the possibility of a deep varix, either in or near a nerve trunk in ambiguous cases of crural neuralgia, is well worth keeping in view. Researches by Reinhardt and Spalteholz, using the injection method, show that in its upper part the inferior gluteal vein lies directly on the sciatic nerve; from it the descending vena ischiadica accompanies the nerve, either lying superficially or actually embedded in the nerve. At intervals along the nerve junction is effected with small neighbouring veins, and at the knee there are anastomoses with the small saphenous and the popliteal. Varices are most apt to occur where anastomoses are found. There are in addition, however, much smaller veins running in the nerve trunk itself, a varicose condition of which could not be detected by clinical examination. Professor Edinger's paper serves a useful purpose in directing attention to this aspect of neuralgia of the lower extremities.

CONTROL OF GLANDERS.

THOUGH the number of deaths that are due to glanders is small, yet the almost invariably fatal nature of the malady makes it one which requires the most careful attention from public health authorities, while its incidence on the horse population is a cause of much pecuniary loss to owners and of suffering to the animals. It may, therefore, not be amiss to consider the methods adopted in other countries for the control of this disease. The February Bulletin of the Department of Health of the City of New York is devoted to this subject and gives an account of the methods of diagnosis there employed. Human deaths from glanders in New York average about 3 a year, the highest number recently being 5 in 1912, and the lowest 1 in the following year. When a case of glanders is recognised in a stable, blood is taken from all the other horses and examined by the complement-fixation test. This is analogous to the Wassermann reaction as used in the diagnosis of syphilis, the antigen being prepared from pure cultures of bacillus mallei. If a positive reaction is obtained, the animal from

which the blood was taken is then examined further by means of the conjunctival test, analogous to Calmette's reaction in tuberculous human beings, four or five drops of undiluted mallein being dropped into the conjunctival sac. In infected horses a reaction commences within six or eight hours and may last from 36 to 48 hours, the eye becoming inflamed and giving rise to a purulent secretion. These two tests applied together are held to give a certain diagnosis, and animals which react to both are destroyed on the strength of them. Other tests for the disease are the intradermal method of injecting mallein, by which a localised swelling in the skin is produced in infected horses, and the agglutination reaction, in which a positive result in a dilution of 1:1000 or over is held to indicate the existence of glanders. The original method of subcutaneous injection of mallein does not seem to be now so often employed, but with care it is also capable of giving reliable results, a rise of temperature of not less than 2·5° F. being considered positive evidence, the temperature of the horse's body rising to at least 103°. Horses which have been exposed to infection, but which give a negative reaction to the tests used, should be examined again after 15 days' interval. It seems that the agglutinins are the earliest antibodies to appear in the course of the infection, being present within the first four or five days. The specific amboceptors upon which the complement-fixation test depends are likely to appear within a week or ten days after infection, while the conjunctival reaction cannot be relied upon to appear before the lapse of three weeks. It must further be remembered that an injection of mallein for diagnostic purposes may itself give rise to the formation of antibodies, which may remain for six or eight weeks, while a vaccine of glanders bacilli may cause the continued presence of these bodies for a period of three months or more.

A PROVINCIAL SYPHILIS DISPENSARY.

THE account given by Dr. E. Malvoz, in the April number of the *Revue d'Hygiène*, of the organisation and work of the Ehrlich dispensary in Liége will interest many English readers, particularly those who have insisted that action by public authorities in this country to diminish syphilis can be successful without requiring compulsory notification of the disease. The Liége dispensary serves the city and province of that name. It is situated in a quiet corner of the town, on the banks of the Meuse, and contains laboratories at which Wassermann tests and other pathological work are done and injections are prepared, as well as the ordinary equipment of a dispensary. The staff comprises an administrative officer, four physicians, a bacteriologist, and a pharmacist, and the consultation days for men include Sundays at 9 A.M. and Saturdays at 8 P.M. From June, 1912, to December, 1913, 833 persons have been treated at weekly attendances, of whom 479 came from communes in the province outside the city. The great majority have come for treatment in the primary or secondary stage, mainly at the instance of the local practitioners, whose coöperation has been very assiduously sought by the management of the dispensary. The dispensary does not undertake the treatment of locomotor ataxy, general paralysis, or other "parasyphilitic" affections which are referred to other establishments. The salvarsan injections hitherto have been made without any untoward results, and in all cases the patient has been able to return home after the injection. Little difficulty seems to have been found in securing that the patients continue to attend for after-observation, and it is made a strict condition that they will keep in necessary communication with the dispensary for some years, so that the results of the treatment can be properly ascertained. The medical staff, according to the system, at no time know of any patient except under a number given to him on his application. Dr. Malvoz states that the patients are greatly struck with the precautions taken in this respect, and that it is one of the causes of the success of the undertaking. Practically the whole of the expense is defrayed jointly by subventions from the municipality and from the province of Liége. Diagnostic tests are free to everyone on making an application endorsed by a medical practitioner; the treatment so far has been limited to those whom there is reasonable ground to suppose would be unable to afford the cost of a "cure stérilisante." Special arrangements are made for pregnant women. The circulars as to the aim and functions of the dispensary, issued under municipal authority to medical men, local administrative bodies, and the public, are admirably drawn up with a view to encourage application at the earliest time after diagnosis, and the committee of the dispensary has issued a strong appeal to the various insurance societies to reverse their usual practice of withholding benefit from members attacked by syphilis. The progress already made seems sufficiently substantial to make this system of municipal action worthy of the attention of the English Royal Commission from the point of view of its applicability to English local public health administration.

THE annual dinner in London of the Indian Medical Service will be held at the Hotel Cecil on Monday, June 8th, at 7.45 P.M. The Edinburgh dinner of the Indian Medical Service will be held on Friday, May 29th, in the Caledonian United Service Club, Sir Alexander Christison, Bart., in the chair. Application for cards for the Edinburgh dinner should be made to Colonel Arnott, 8, Rothesay-place, Edinburgh.

THE Medical Society of London will hold a conversazione at 11, Chandos-street, Cavendish-square, on Monday evening, May 18th, at 8.30. The annual oration will be delivered by Mr. Robert Jones at 9 P.M. on the Surgical Aspect of Poliomyelitis. During the evening the society's Fothergillian medal will be presented to Professor J. G. Adami, F.R.S., of Montreal.

THE Ingleby lectures for 1914 will be delivered on Thursdays, May 21st and 28th, at 4 P.M. in the Medical Lecture Theatre of the University of Birmingham, by Dr. T. Stacey Wilson, physician to the Birmingham General Hospital, on the subject of Neurasthenia: Its Causes and Cure.

INVALID CHILDREN'S AID ASSOCIATION.—The annual meeting of this association will be held at Seaford House, 37, Belgrave-square, S.W., on May 19th, at 3 P.M. Field-Marshal Lord Methuen will preside, and the Bishop of London and Sir Thomas Barlow will be among the speakers. Application for tickets may be made to the secretary, 69, Denison House, Vauxhall Bridge-road, S.W.

THE INTERNATIONAL SURGICAL ASSOCIATION.

(FROM OUR OWN CORRESPONDENT.)

(*Continued from p. 1271.*)

THE Congress resumed its sittings, under the presidency of Dr. A. Depage, at the Hotel Astor, New York City, on Tuesday, April 14th. The morning and afternoon sessions were devoted to the reading and discussion of papers on gastric and duodenal ulcers. Wednesday's sessions were given up to papers and discussions on grafts and transplantations, while on Thursday the discussion on the surgery of gastric and duodenal ulcer was concluded.

Gastric and Duodenal Ulcers.

Dr. F. de QUERVAIN (Basle) was on the programme for the first paper, dealing with the diagnosis of gastric and duodenal ulcers. As he was not present his paper was taken as read. His communication dealt in particular with clinical and radiological diagnosis of these conditions and the problems concerned therewith. He affirmed that apart from certain well-established facts there remain a great number of open and controversial questions, and he confined himself to those problems in diagnosis which are still uncertain, in the hope that the Congress would throw some light upon them. The debatable questions selected by him were the following:—1. What is the frequency of spasm in the superficial ulcer of the lesser curvature? 2. Under what conditions does this spasm occur in the absence of any ulcer? 3. What are the surest and most practical distinguishing signs between pyloric spasm and pyloric stenosis in the beginning? 4. What is the diagnostical meaning of the persistent repletion of the duodenal bulb ("gastric bonnet")? 5. What is the symptomatological value of the duodenal movement of the stomach? 6. What differentiation is there between duodenal ulcers encroaching upon the pylorus, true pyloric ulcers, and duodenal ulcers of low situation, from the point of view of their action on the pyloric reflex and on the gastric chemistry? 7. What are the surest radiological signs of adhesions in connexion with the stomach and duodenum?

The next paper was a joint contribution by Dr. H. HARTMANN and Dr. P. LECÈNE (Paris), which was read by Dr. Hartmann. The authors expressed the opinion that while duodenal ulcer was certainly more frequent, its frequency had been exaggerated, and in France, at the very least, they had noticed on an average one ulcer of the duodenum for eight or ten ulcers of the stomach. Moreover, they thought that the clinical criteria and the anatomical characteristics, the situation and disposition of the pyloric vein, were far from being beyond criticism. In their opinion the symptomatology described by Moynihan was simply that of pyloric spasm, while as for the pyloric vein it was very unreliable as regards situation and disposition. At the base of callous ulcers of the stomach, which were situated especially on the lesser curvature, were frequently to be found evidences of neuritis in the small nerve ganglions lying in the substance of the sclerosed muscular coats. These changes might account for the persistent pains which were often the predominant symptom of such ulcers. With regard to surgical treatment the authors preferred posterior gastroenterostomy performed on the pyloric antrum itself.

Dr. W. J. MAYO (Rochester, Minnesota) read a paper on

Chronic Ulcers of the Stomach and Duodenum.

He pointed out that the first case of pyloric obstruction was operated upon in St. Mary's Hospital, Rochester, in 1895, a Heinicke-Mikulicz pyloroplasty being performed. The second operation was a gastro-jejunostomy with the Murphy button. From 1900 to 1906 it was recognised that obstruction was a terminal condition, and studies were undertaken with a view to the early termination of the malady. The suture took the place of the Murphy button and the posterior method of gastro-jejunostomy replaced the anterior method. From 1906 to 1914 the relation of the clinical symptoms to the lesion came to be better understood, the Roentgen ray took the first place in the diagnosis of these lesions, the value of the purely laboratory examination of gastric contents was found to have been overestimated, and the necessity for the excision of gastric ulcers, because of the menace of cancer, was recognised. Dr. Mayo laid stress on the point that in differentiating between an ulcer in the pyloric end of the stomach and one in the first portion of the duodenum the situation of the pyloric vein is the determining factor. He explained that the terminal three-fourths of an inch of the pyloric end of the stomach was not often involved in ulcer. The more common seat of gastric ulcer was along the lesser curvature, often saddle-shaped. The ulcer was more often on the posterior than the anterior wall, but whether situated anteriorly or posteriorly a superficial ulcer at the point of contact often appeared on the opposite wall—the "contact" ulcer. Multiple ulcers were not frequently found at operation, contrary to the early views based on clinical observations and post-mortem findings in deaths due to acute ulcerative processes in the stomach. These processes were usually gastro-toxic in origin and not often the source of chronic ulcer. The character of ulcers of the duodenum differed in many respects from that of ulcers of the stomach. They were usually to be found in the upper two inches of the duodenum and more often in the antero-superior wall. When found on the posterior wall they were usually of the same character as when found in the stomach. As a rule, the duodenal ulcer had its origin below the pylorus, but when it extended towards the stomach it usually stopped short at the pylorus, which it might undermine. In exploring for ulcers of this description there was occasionally a difficulty in discovering the posterior ulcer because it was concealed under the projecting pyloric ring. The mucous membrane of the upper duodenum was thin and glandular, and ulcers confined to the anterior wall, if they assumed eventually the crater-like character of the gastric ulcer, would develop into a localised mass over the site of the ulcer. Often, however, no crater was found in the mucous membrane in duodenal ulcer, but rather a discoloured, motheaten-looking patch, in the centre of which might be a dimple-like ulcer and outside this a typical induration. This variation from the ordinary type of ulcer probably explained why duodenal ulcers had so often been overlooked at necropsy. Dr. Mayo thought that permanent healing of chronic ulcers of the stomach and duodenum by non-operative means must be of rather infrequent occurence. Gastro-jejunostomy was the most generally useful operation for gastric ulcer, and had a wide field of application. Especially was this true when there was obstruction in the vicinity of the pylorus. While posterior gastro-jejunostomy was the operation of choice, in certain cases adhesions might prevent its use. In these cases the anterior operation had given good results. Dr. Mayo insisted that because of the menace of cancer all ulcers of the stomach, without regard to their situation, should be excised if possible. Local excision of the ulcer without gastro-jejunostomy had sometimes failed to effect a cure. Therefore, as a rule, gastro-jejunostomy should be done in addition to excision. Gastro-jejunostomy was a most satisfactory operation in all those cases of ulcer of the duodenum in which there was actual or potential obstruction. Moynihan had been followed in enfolding the ulcer with fine silk and placing one or two sutures in such a manner as to block the pylorus to prevent food from entering the ulcer and during the healing period. This blockage by suture could not be expected to be permanent, but in connexion with the permanent obstruction produced by healing of the ulcer it usually answered the purpose. If there were neither actual nor potential obstruction, this blockage should be accomplished by more efficient means. Referring to the results of operative procedures, Dr. Mayo thought that at least 95 per cent. of those with gastric ulcer would be cured or greatly relieved by operation. The operative mortality in the gastric ulcers at St. Mary's Hospital, Rochester, counting all cases dying in the hospital without regard to the length of time after the operation or to the cause of death, was 3·8 per cent. The results in duodenal ulcer were extraordinarily good, 98 per cent. of the patients either having been cured or greatly relieved by the operation.

Dr. E. PAYR (Leipsic) read a paper on

Ulcers of the Stomach and Duodenum.

He maintained that with regard to etiology and pathogeny there were two principal theories: (*a*) that of a gastric or duodenal vascular lesion (thrombosis, embolism, sclerosis);

and (*b*) nervous origin by vaso-motor spasm leading to a localised ischæmia of the mucosa; the cause of this spasm will be a disturbance of the sympathetic nervous system. Neither of these theories was sufficient to explain every case, and many points in gastro-duodenal biological chemistry were still unexplained. Some mechanical causes operated in the localisation and the form of the ulcers. Bacterio-toxic lesions also played a certain part. With regard to variety, Dr. Payr distinguished two types of duodenal ulcer according as its position was on the anterior or posterior wall. The first presented more a tendency to perforation, the second to hæmorrhage. Between the ulcer of the duodenum and that of the stomach there existed very appreciable anatomical and chemical differences. With regard to degeneracy, Dr. Payr said that cases of malignant transformation of ulcers undoubtedly occurred, and such "cancerised" ulcers could be readily distinguished from ulcerating cancers. But it was often difficult to differentiate these two types from simple callous ulcers, especially when it was a question of cancers possessing numerous fibrous tissues such as Thomson's fibroids. Ulcer and cancer might also coincide in the stomach. Ulcer of the duodenum showed very rarely a carcinomatous degeneracy. With regard to technique, the callous ulcer of the stomach should be resected whenever the general condition of the patient permitted, especially when it was a question of small ulcers situated at a distance from the pylorus at the lesser curvature and on the posterior surface. In all other cases posterior gastro-enterostomy was the operation of choice. The excision of gastric ulcers, unless accompanied by gastro-enterostomy, generally gave unsatisfactory results on account of the persistent pyloro-spasm. For duodenal ulcer the best intervention consisted of a gastro-enterostomy combined with a unilateral pyloric exclusion after von Eiselsberg's method. If this operation was not feasible the best way was to shorten the pylorus by means of an aponeurotic band or a suspensory ligament. It was necessary to bury the band under a sero-serous continuous suture. The exclusion of the pylorus might be combined with a suspension of the stomach. Von Eiselsberg's technique alone gave certain results. In ulcers of the lesser curvature and those of the posterior surface total segmentary resection with axial suture of the stumps gave the best results. Gastro-enterostomy for simple or callous ulcers necessitated a consecutive treatment of atropine and alkalies for at least a year. In cicatricial stenosis of the pylorus gastro-enterostomy gave excellent results; but with active ulcers, especially when distant from the pylorus, the results were less reliable. Only in 50 to 66 per cent. of these cases was success achieved. The mortality in resection of ulcers, especially by the total segmentary method of Riedel, was 10 per cent. or less, but it remained higher than that of gastro-enterostomy. The clinical results of resection were good.

(To be concluded.)

MEDICINE AND THE LAW.

The Workmen's Compensation Act.

His honour Judge Mulligan, K.C., recently delivered judgment at Norwich declining to review an award of 5*s.* a week made to a labourer named Page in respect of injuries received in the service of his deceased employer, Mr. H. Hammond. The ground for the application was that the workman's present incapacity was not due to the accident. It was admitted that Page was unable to earn full wages, that since the date of the accident general paralysis of the insane had supervened, and that at an earlier date when he could have done light work he did not try to get it. His honour in giving his decision based it on Plumb *v.* Dawson, a case decided in December, 1913, and upon findings of fact which he stated thus:—

1. A constitutional predisposition rendered Page more prone to succumb to the malady than a man of normal condition.

2. The accident preyed on his mind and set up over-excitement of the brain, which either formed part or was an offspring of the original injury.

3. The worry worked on the over-susceptible brain and was the exciting cause of the malady.

4. The malady had destroyed conscious volition and thereby incapacitated the man for work, for he was bereft of will-power by the accident.

5. Had it not been for the enforced illness consequent on the accident and for the attendant privations and worries, multiplied as they were by the unjust stoppage of all compensation in January, 1913, Page would now in all probability be doing his usual work.

6. The incapacity of Page for work was one of "the entire results causally connected with the injury." (Ball *v.* Hunt, 1, W.C.R. 267.) The chain of causation was complete.

Wall v. *Gretor.*

Mr. Justice Lush, sitting without a jury, was occupied recently for some time with the trial of an action brought by Mr. V. F. Wall against Mr. W. Gretor to recover £141 19*s.* for medical attendance. According to the plaintiff's case he attended the defendant, who was addicted to morphia, from January to October, 1913, and ceased to do so on account of offensive observations made to him by the defendant in the presence of the defendant's servant with regard to his (the plaintiff's) personal appearance and clothing. He charged a guinea for ordinary visits and 2 guineas for visits of more than 30 or 40 minutes and for visits after dinner. The defence was that the charges were excessive. Evidence was given on both sides, alleging and denying a verbal arrangement as to the fees to be charged. The defendant himself was not present at the trial, and his evidence had not been taken on commission. Mr. Justice Lush, in giving judgment, observed that the defendant was a gentleman of considerable means who suffered from the habit of taking morphia in large doses, and that medical men undertaking such cases would probably make arrangements beforehand to charge special fees. It was necessary for the medical attendant to acquire, if possible, influence over his patient. The plaintiff, he found, had made the bargain referred to above, and there was no reason for abating the sums charged. No charge in some instances had been made where it would have been reasonable to make one. Deducting 2 guineas for an occasion when the plaintiff and his wife had dined with the patient, his lordship gave judgment with costs for the amount claimed, less £40 paid into court.

The Privilege of Medical Witnesses.

The question of a medical man's duty with regard to his patients[1] and of his right to claim privilege in the witness-box was again raised in a county court, and in a claim under the Workmen's Compensation Act, in an arbitration before his honour Judge Longstaffe, at Dewsbury. The claimant for compensation had been burnt in an explosion of gas when lighting a lamp in the early morning, and it was alleged on the part of the employers that on Dec. 6th, on which day she went to her home, she had been pronounced by a medical man to be likely to recover in two days, her claim being for compensation up to Jan. 5th. The employer's solicitor accordingly proposed to put Mr. G. Patterson, medical attendant under the Insurance Act to the claimant, in the box, to which her advocate objected. The judge ruled that the matter lay between Dr. Patterson and his own conscience, and he was sworn. On his being asked a question as to the

[1] THE LANCET, April 4th, p. 978.

condition of his patient when under his care, he was told by Judge Longstaffe that he was not obliged to answer it, but he said that he saw no reason why he should not do so. When his answer was heard it was found to be to the effect that on Dec. 6th there was still injury from the burn, but that he thought it would be better in a few days. From the condition of the girl's arm when he saw it he thought she might be incapacitated till Jan. 5th. This was the date on which according to the claimant's own case her incapacity ceased, and judgment was given for her for the amount claimed. It will be seen, therefore, that the evidence of the medical attendant was in favour of his patient's case, and that the objection raised on her behalf to his giving evidence was not necessary. He undoubtedly exercised rightly his discretion, but a different problem would have arisen if the result of his observation had been that the claimant was asking for compensation to which she was not entitled. If this had been so, his evidence, if given, would have been detrimental to his patient's case. As to this some will say that he would then have done rightly in declining to answer, others that he would have been right if he had spoken out and assisted the court to arrive at a just decision. It is in fact as well as in law, as the judge pointed out, a matter of conscience. Probably in practice if a medical man is not called on behalf of his patient and declines to answer questions when asked by the other side who have put him in the witness-box, an inference hostile to his patient is usually to be drawn, so that the result is not likely to be very different from what it would be if he spoke out. In the particular case described above it is to be supposed that neither side knew what the medical man was prepared to say, and it may even be suggested that if they had known the case might not have come before the judge.

Henry Delvine, "Cancer Expert."

At the Central Criminal Court Henry Delvine, whose exploits as a "cancer expert" have attained for him notoriety through numerous prosecutions having been initiated against him in the country as well as in London, was sentenced to 15 months' imprisonment with hard labour. We need not tell the story of the case in detail, as the press has given full publicity to it. The indictment charged him with obtaining money by false pretences and he pleaded guilty to it. One of the methods frequently adopted by Delvine was to administer a supposed treatment and then, after personally examining the patient either alone or with only a person employed by himself present, to produce a piece of animal offal purchased from a butcher which he would display as "a removed cancer." It may be mentioned as showing the hold which the prisoner acquired over the public that he was recently charged at Downham Market with a criminal assault upon a married woman alleged to have been made under the pretext of an examination, and that when the magistrates dismissed the charge Delvine was carried shoulder high through the town. Before he was sentenced he was described by counsel for the prosecution as being an illiterate person, who had been a soldier, a county court bailiff, and a labourer.

SOCIAL WELFARE ASSOCIATION.—The annual meeting of this association will be held at the Mansion House on Monday, May 18th, at 3 P.M. The Lord Mayor, as President of the association, will preside.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

MEETING OF COMITIA.

A COMITIA was held on April 30th, Sir THOMAS BARLOW, Bart., K.C.V.O., the President, being in the chair.

The following gentlemen having passed the required examination were admitted Members of the College:—Richard Robins Armstrong, M.B. Cantab., L.R.C.P.; George Ernest Beaumont, M.B. Oxon., L.R.C.P.; Harold Black, M.B. Belf. (Birmingham); Arthur Neville Cox, M.D. Lond. (Brighton); Trevor Braby Heaton, M.B. Oxon.; Geoffrey Hoffmann, M.B. Cantab., L.R.C.P.; William James O'Donovan, M.D. Lond., L.R.C.P.; Frederick Paine, L.R.C.P. (Woodford Bridge, Essex); John George Porter Phillips, M.D. Lond., L.R.C.P.; Arthur John Scott Pinchin, M.D. Lond., L.R.C.P.; Thomas Henry Gostwyck Shore, M.B. Cantab., L.R.C.P.; Atul Krishna Sinha, M.B. Cal., L.R.C.P.; and Kenneth Douglas Wilkinson, M.D. Birm. (Birmingham).

Licences to practise physic were granted to 105 gentlemen who had passed the required examinations.

The following Members were elected Fellows of the College:—Cuthbert Henry Jones Lockyer, M.D. Lond.; William Mitchell Stevens, M.D. Lond. (Cardiff); Arthur Stanley Barnes, M.D. Lond. (Birmingham); James George Taylor, M.D. Cantab. (Chester); Dudley William Carmalt-Jones, M.D. Oxon; Samuel Alexander Kinnier Wilson, M.D. Edin.; Hector Charles Cameron, M.D. Cantab.; John Foster Gaskell, M.D. Cantab.; Gordon Morgan Holmes, M.D. Dub.; Robert McCarrison, M.D. R.U.I. (Bombay); Frederick Gowland Hopkins, M.B., D.Sc. Lond., F.R.S. (Cambridge); and Sir Alfred Henry Keogh, M.D. Q.U.I.

Sir William Boog Leishman, M.B. Glasg., F.R.S., was also elected a Fellow under By-law LXXI (b).

The following communication was received: From the Secretary of the Charity Commissioners informing the College that the Commissioners have at present under consideration proposals for a scheme of consolidating the British Lying-in Hospital, Endell-street, and the Home for Mothers and Babies, Woolwich, and constituting a managing committee for the administration of the "Maternity Hospital and School for the Higher Training of Midwives," to the establishment and maintenance of which at Woolwich it is desired that the funds of the consolidated charities should be made applicable. The Commissioners inquired whether the College would be prepared to nominate a representative of the College on the managing committee. It was resolved to consent to the proposition.

After some further formal business the PRESIDENT dissolved the Comitia.

Public Health.

REPORTS OF INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

On an Outbreak of Enteric Fever at Kenilworth, by Dr. E. P. MANBY.[1]—This report, which is illustrated by diagrams and a map, gives an interesting account of a small epidemic, affecting 44 persons, which lately occurred in the town of Kenilworth, and was clearly to be attributed to the pollution of the public water-supply. Forty-one of the cases were attacked between Nov. 22nd and Dec. 25th, 1913, 26 of these falling ill between Dec. 5th and 12th. The affected dwellings were scattered over the whole town; all were in the area supplied by the Kenilworth Waterworks Company, and no other source of epidemic infection, such as infected milk, was to be discovered. The water is partly obtained by pumping from two bore wells in the town, each over 200 feet deep, and provided that the tubes are sound and do not admit surface soakage, this portion of the supply is above suspicion in the matter of purity. After obtaining powers from Parliament in 1882 to supply water from wells, however, the company proceeded two years later to construct, in addition, what is termed in the report an "adit."

[1] Local Government Board Medical Reports, New Series, No. 92. London: Wyman and Sons, Fetter-lane; Edinburgh: H.M. Stationery Office; Dublin: E. Ponsonby. Price 1s.

but seems to have been merely a deep trench near the waterworks, which was bricked over and covered with earth. Ever since, until the recent outbreak, the company have continued to use the adit water as an integral or even as the main part of their supply, its use being particularly convenient, as it diminished the amount of pumping required. The adit intercepts water flowing underground towards the Finham Brook, and had an overflow into this stream, which was protected only by a flap cover, with the result that when the water in the stream was high a reverse flow into the adit could take place. This must have happened about the middle of November, at which time the Finham brook, which ordinarily receives the storm overflow from a section of the Kenilworth sewers at a point above the waterworks, was exceptionally polluted in consequence of one of the branch sewers having become blocked, thus bringing the storm overflow into operation. Among the earliest cases of the series was one which occurred early in November in a house draining to this branch sewer. Perhaps the most remarkable part of the story is the local ignorance which seems to have prevailed for so many years as to the existence of this substantial risk to the purity of the supply. Once the epidemic occurred and the water was looked into by the responsible authorities the source of pollution was self-evident. Dr. Manby considers that the principal reason that the risk has been so continuously ignored is "no doubt that the adit had so long been in existence that it was accepted by all concerned as an established source of supply, recognised by Parliament, and needing only occasional analytical checks rather as a matter of form than as an essential safeguard against an actual risk." As a fact, some of the analyses made in the past did give some indications that impurities might be gaining access to the water-supply, but these were not followed up. The report states that responsibility in these matters must rest with the water company. The district council might have done more in the way of control analyses, but they had not the facts as to the sources and origin of the supply fully before them, and in any case had no responsibility for furnishing a supply of good quality. The lesson of the outbreak is an old one, but there are probably not a few parts of the country where it can still profitably be learnt, and where the surroundings of local wells and the origin of the water should be inquired into without waiting either for an outbreak of water-borne disease or for a definite condemnatory analysis. The other feature of interest was the appearance between Nov. 19th and 26th of a general outbreak of gastro-enteritis in the town, almost immediately after the date on which the sewage pollution of the water of the adit appears to have occurred, and more than a week before the enteric fever became generally epidemic. This occurrence recalls the preliminary gastro-enteritis which has been reported in other water-borne epidemics in England and America. Dr. Manby notes that "gastric influenza" was prevalent in this part of Warwickshire at the time, and that this form of sickness was occurring about the same time in villages near Kenilworth which do not receive the Kenilworth water. On the whole, however, he concludes that the contaminated water-supply was responsible for a number of the cases of gastro-enteritis which so suddenly appeared in Kenilworth in the period in question. Some residents, both medical and lay, suggested that 50 per cent. of the inhabitants of the town were attacked by it, and all agreed that very few households escaped altogether. Some attacks were severe, but no deaths resulted. The enteric fever mortality itself was not severe; only 4 deaths occurred. The report testifies to the unremitting efforts of Dr. C. E. Tangye, the medical officer of health, and the officials of the district council and the waterworks company to deal with the outbreak. The advice of Dr. A. C. Houston was obtained for the disinfection of the water mains, which was accomplished by the addition from a tank of sodium hypochlorite in quantity sufficient to run chlorinated water through the mains on the first day at a strength of 1 in 100,000, and on the second of 1 in 50,000.

REPORT OF THE MEDICAL OFFICER OF HEALTH OF JOHANNESBURG FOR 1912–13.

Dr. Charles Porter now has under his charge the public health of a population which exceeds a quarter of a million. The municipal area of Johannesburg measures about 11 miles across in one direction and nine in another, and by the standards of large English cities its resources for public works would be enormous, as its property has a value for rateable purposes of 33 millions, and in 1912–13 a 1*d.* rate produced about £100,000. The main water-supply, from deep wells in the dolomite at Zuurbekom, 18 miles west of Johannesburg, is said to be of exceptional purity, but a supplementary supply from the Klip River valley, to which surface water gains access, has been considered unsafe in its natural state, and for the past six years has been treated with chlorinated lime (guaranteed over 30 per cent. available chlorine) in the proportion of 13 lb. per million gallons. The results are stated to have been satisfactory. An after-process for softening the water has proved almost useless, and has been abandoned pending the introduction of a new scheme. Sewerage on the separate system is being extended, but the majority of the houses are served by a system of daily collection of night soil and slop-water, which are turned into the sewers at special intakes. Among other municipal services special reference should be made to the public abattoir, opened in 1910, the veterinary director of which contributes a report which shows that it has so far yielded a profit on the capital invested, and secures a very thorough means of satisfactory inspection of the meat supply. The percentage of tuberculous cattle is given at 0·13 and of tuberculous pigs 0·97. Reciprocity with other towns has been arranged in regard to meat inspection. Butcher's meat is admitted without charge into the Johannesburg municipal area if it bears the stamp of a municipality which has itself power to enforce meat inspection charges and admits free of charge butcher's meat bearing the Johannesburg meat stamp. Each municipality concerned, however, reserves to itself the right to subject the meat to any further inspection which seems necessary. A report on the circumstances of milk production in and around Johannesburg, made by the acting assistant medical officer of health, Dr. J. Pratt Johnson, is much less satisfactory. This report relates less to disease of milch-cows than to the contamination of milk by dirt, which appears commonly to take place on a considerable scale at many points on the way from the dairy to the consumer. Special complaint is made of the contamination which results from the usual practice of leaving the conduct of the dairy to Kaffirs, from the filthy water used for cleaning bottles and other dairy purposes, from access of flies, and other causes. Dr. Johnson's report contains a number of practical suggestions for improvement, and Dr. Porter, in an introduction to the report, urges the necessity for special dairy inspectors, and represents that, failing reforms effected by voluntary coöperation of farmers with the health authorities, the practicability of a large measure of municipalisation of the milk trade must be seriously considered. The general death-rate for 1912–13 was 19·49 per 1000; that among the white population, which numbers 134,000, was 11·3; among the natives 28·4; and the group of "Eurafricans and Asiatics" 24·4. The birth-rate of the white population remains high, 32 per 1000, and their infantile mortality rate was 99 per 1000 births. The death-rates from tuberculosis and miners' phthisis respectively during the year were, among the white population, 0·36 and 0·52; among the natives, 3·46 and 0·82; and among Eurafricans and Asiatics, 2·16 and 0·13. Pneumonia has, as usual, represented the principal cause of death among the native population. The Tuberculosis Commission appointed in 1912 has, in addition to a reference to investigate the extent and causes of the prevalence and spread of tuberculosis in various forms among all classes of the population, the duty of reporting on the extent and causes of the mortality among natives employed on the Witwatersrand mines and their susceptibility to pneumonia. The isolation hospital provision for Johannesburg appears to be made by the Government, the municipality being charged a fixed rate per case. A new isolation hospital is now to be erected. The occurrence of scurvy among some of the natives employed by the corporation has led to a careful study of their diet scale by Dr. P. G. Stock, who shows that it has fallen short considerably in protein, fat, and salt, and recommends an additional supply of bread and meat to make good these deficiencies, with a reduction in mealie meal, which when supplied should be in the form in which some of the germ and the husk are retained.

REPORTS OF SCHOOL MEDICAL OFFICERS.

County of Stirling.—Dr. T. Adam's report shows that the entrants, leavers, and two intermediate age groups of 7 and 10 years children were examined in the period under review. Much time is also given to special cases and reinspections. Only four or five per cent. of parents attend at the examinations. Nurse Gibson, school nurse, reports on following-up work and records an objection to treatment of a girl's squint by her mother, who said, "I've got a squint and I got a man, and surely she'll get a man even wi' her squint." The value of the report is very seriously reduced by the absence of index or contents.

Edinburgh School Board.—The schools in Edinburgh had 45,974 on the roll, and of these 26,173 were inspected during the year reviewed. Dr. J. Hally Meikle is able to record a successful experiment in providing meals at 5*d.* a week for "semi-necessitous children." The average cost per meal was 1·7 pence, but this plan reduced the applicants for free meals. A good photograph is given of the cooking centre, and other pictures show the special and open-air schools. The Edinburgh Merchant Company Schools came for the first time into the system of medical inspection, and the children inspected varied from the age of 5 to 17 years. The character of the schools is unfortunately not made clear in the report, but they appear to correspond with high schools or secondary schools. Nutrition was much above the Edinburgh elementary school average in the Merchant Company Schools and above the anthropometric standard in nearly all cases.

Glasgow School Board.—In 10 schools in this area there are spray baths in operation and in 2 foot-baths. On one afternoon and two mornings an "examination clinic" is held by the chief medical officer, Dr. E. T. Roberts, at the offices of the board. Treatment of "necessitous" children is carried out under the education authority's direction by the work of eight part-time dentists, three anæsthetists, three oculists, one aurist, one dematologist, and six nurses. Skin diseases and ear discharge are also dealt with, favus and ringworm need special treatment, and an X ray apparatus has been installed. 72·3 per cent. of the parents attend inspections. The report is well arranged and easy of reference, and contains useful matter concerning the various classes of special schools. The classes for semi-deaf, semi-mute, and young deaf children are continued.

Warwickshire County Council.—Dr. A. Bostock Hill's report shows that a very great deal of good work is being done, especially by the health visitors in the country districts. The distance difficulty is well brought out in the account of the mother who had to make a journey of 9 miles on 15 occasions, pushing a perambulator with the patient and a baby, to get treatment for ringworm. The same difficulty also has a considerable influence on the nutrition of school children, as those who live far from the school often bring with them "lunch" of an innutritious character. Important improvements have been made in school buildings, but indefensible "sanitary" conveniences appear to remain in connexion with too many.

Cambridgeshire County Council.—During 1912 the boundaries of the borough of Cambridge were extended and the county is now exclusively rural in character. Efforts are being made to cope with the problem of treatment, and arrangements exist for the provision of hospital letters to Addenbrooke's Hospital, for the purchase of spectacles, and for dental treatment. The hospital letter machinery, involving investigation by the education secretary, seems cumbrous. Only 41 per cent. of cases of enlarged tonsils and adenoids received treatment, and even this was an improvement on previous years. Dr. Frank Robinson notes the installing of a new type of sanitary pail which retains solid matter and permits the escape of liquid to a cesspool. Mr. A. W. Gant contributes a short report on the Stapleford dental clinic.

Huntingdonshire County Council.—Dr. C. B. Moss-Blundell hopes for the establishment of school clinics in connexion with the tuberculosis dispensaries. Advice is given to those who call at the medical officer's office on Saturday morning, and ringworm, skin disease, and cases referred from the school attendance officer have been seen. No other treatment agency as a part of the school organisation exists, and a large proportion of children go untreated.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN the 97 English and Welsh towns with populations exceeding 50,000 persons at the last Census and whose aggregate population at the middle of this year is estimated at 18,120,059 persons, 9069 births and 4938 deaths were registered during the week ended Saturday, May 2nd. The annual rate of mortality in these towns, which had been 15·0, 14·9, and 15·1 per 1000 in the three preceding weeks, declined to 14·2 per 1000 in the week under review. During the first four weeks of the current quarter the mean annual death-rate in these towns averaged 14·8, against 13·8 per 1000 in London during the same period. Among the several towns the death-rate last week ranged from 5·9 in Swindon, 6·6 in Eastbourne, 7·9 in Wimbledon, 8·3 in Coventry, and 8·4 in Willesden, to 20·6 in South Shields, 21·9 Middlesbrough, in West Hartlepool, and in Swansea, 22·0 in Plymouth, and 23·2 in Barnsley.

The 4938 deaths from all causes were 321 fewer than the number in the previous week, and included 453 which were referred to the principal epidemic diseases, against 438 and 445 in the two preceding weeks. Of these 453 deaths, 155 resulted from measles, 139 from whooping-cough, 59 from infantile diarrhœal diseases, 50 from diphtheria, 35 from scarlet fever, and 15 from enteric fever, but not one from small-pox. The mean annual death-rate from these diseases was equal to 1·3 per 1000, and coincided with the rate in the two preceding weeks. The deaths attributed to measles, which had been 134, 153, and 140 in the three preceding weeks, rose to 155 last week, and caused the highest annual death-rates of 1·7 in Rochdale and in Sheffield, 1·8 in Merthyr Tydfil, 2·0 in Smethwick, 2·9 in Barnsley, 3·0 in Dudley, and 3·5 in Stockton-on-Tees. The deaths referred to whooping-cough, which had been 150, 117, and 166 in the three preceding weeks, declined to 139 last week; the highest death-rates recorded from this disease were 1·1 in Stoke-on-Trent, 1·2 in Middlesbrough and in Newport (Mon.), 1·3 in Gateshead and in Swansea, and 1·7 in Enfield. The fatal cases of diarrhœa and enteritis (among infants under 2 years), which had been 54, 61, and 66 in the three preceding weeks, fell to 59 last week, and included 17 in London, 5 in Manchester, 4 in Birmingham, 3 in Liverpool, and 3 in Sheffield. The deaths attributed to diphtheria, which had been 44, 50, and 40 in the three preceding weeks, rose to 50 last week; of this number, 8 were recorded in London, 8 in Birmingham, 3 in Liverpool, 3 in Bradford, and 2 each in Tottenham, Leyton, and Stoke-on-Trent. The deaths referred to scarlet fever, which had been 39, 40, and 23 in the three preceding weeks, rose to 35 last week, and included 5 in London, 5 in Liverpool, 3 in Birmingham, and 3 in Sheffield. The fatal cases of enteric fever, which had been 12, 17, and 10 in the three preceding weeks, rose to 15 last week, of which 3 occurred in London and 2 in Manchester.

The number of scarlet fever patients under treatment in the Metropolitan Asylums and the London Fever Hospitals, which had declined from 3182 to 2886 in the four preceding weeks, had further decreased to 2876 on Saturday last; 377 new cases were admitted during the week, against 306, 289, and 305 in the three preceding weeks. These hospitals also contained on Saturday last 1129 cases of diphtheria, 336 of whooping-cough, 104 of measles, and 55 of enteric fever, but not one of small-pox. The 1116 deaths from all causes in London were 132 fewer than the number in the previous week, and corresponded to an annual death-rate of 12·9 per 1000. The deaths referred to diseases of the respiratory organs, which had been 219, 263, and 258 in the three preceding weeks, further declined to 185 in the week under notice, and were 60 below the number recorded in the corresponding week of last year.

Of the 4938 deaths from all causes in the 97 towns, 151 resulted from various forms of violence, and 341 were the subject of coroners' inquests, while 1409 occurred in public institutions. The causes of 31, or 0·6 per cent., of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest. All the causes of death were duly certified in Leeds, Bristol, West Ham, Bradford, Newcastle-on-Tyne, Nottingham, and in 71 other smaller towns. Of the 31 uncertified causes of death, 4 were recorded in Liverpool, 3 in Birmingham, and 2 each in London, Bootle, Warrington, Manchester, Blackburn, and Hull.

HEALTH OF SCOTCH TOWNS.

In the 16 largest Scotch towns with an aggregate population estimated at 2,293,200 persons at the middle of this year, 1283 births and 669 deaths were registered during the week ended Saturday, May 2nd. The annual rate of mortality in these towns, which had been 16·5, 16·0, and 16·9 per 1000 in the three preceding weeks, declined to 15·2 per 1000 in the week under review. During the first four weeks of the current

quarter the mean annual death-rate in these towns averaged 16·2, against a corresponding rate of 14·8 per 1000 in the 97 large English towns. Among the several towns the death-rate last week ranged from 7·6 in Kirkcaldy, 8·2 in Clydebank, and 9·4 in Falkirk, to 19·1 in Kilmarnock, 20·6 in Coatbridge, and 21·4 in Motherwell.

The 669 deaths from all causes were 72 fewer than the number in the previous week, and included 61 which were referred to the principal epidemic diseases, against 55 and 71 in the two preceding weeks. Of these 61 deaths, 19 resulted from measles, 17 from infantile diarrhœal diseases, 13 from whooping-cough, 8 from diphtheria, 2 from scarlet fever, and 2 enteric fever, but not one from small-pox. The mean annual death-rate from these diseases was equal to 1·4, against 1·3 per 1000 in the 97 large English towns. The deaths attributed to measles, which had been 31, 20, and 29 in the three preceding weeks, declined to 19 last week, of which 11 occurred in Glasgow, 3 in Edinburgh, and 2 in Dundee. The deaths of infants (under 2 years) referred to diarrhœa and enteritis, which had been 5, 13, and 18 in the three preceding weeks, were 17 last week, and included 8 in Glasgow, 3 in Aberdeen, and 2 in Dundee. The fatal cases of whooping-cough, which had declined from 15 to 9 in the four preceding weeks, rose to 13 last week, of which 8 were recorded in Glasgow and 3 in Coatbridge. The deaths attributed to diphtheria, which had been 7, 4, and 9 in the three preceding weeks, were 8 last week, and included 2 in Glasgow and 2 in Edinburgh. The deaths referred to scarlet fever, which had been 6, 7, and 4 in the three preceding weeks, further fell to 2 last week, and were recorded in Glasgow and Dundee. The 2 fatal cases of enteric fever, which were equal to the average in the three preceding weeks, were registered in Glasgow and Dundee.

The deaths referred to diseases of the respiratory system, which had been 137, 120, and 130 in the three preceding weeks, declined to 90 in the week under notice; and 28 deaths resulted from different forms of violence, against 29 and 31 in the two preceding weeks.

HEALTH OF IRISH TOWNS.

In the 27 town districts of Ireland, with an aggregate population estimated at 1,205,280 persons at the middle of this year, 712 births and 477 deaths were registered during the week ended Saturday, May 2nd. The annual rate of mortality in these towns, which had been 20·3, 22·5, and 25·3 per 1000 in the three preceding weeks, declined to 20·6 per 1000 in the week under notice. During the first four weeks of the current quarter the mean annual death-rate in these towns averaged 22·2, against corresponding rates of 14·8 and 16·2 per 1000 in the English and Scotch towns respectively. The annual death-rate last week was equal to 24·5 in Dublin (against 12·9 in London and 14·8 in Glasgow), 18·2 in Belfast, 23·1 in Cork, 19·0 in Londonderry, 23·0 in Limerick, and 20·9 in Waterford, while in the 21 smaller towns the mean rate did not exceed 16·9 per 1000.

The 477 deaths from all causes were 107 fewer than the number in the previous week, and included 63 which were referred to the principal epidemic diseases, against 75 and 69 in the two preceding weeks. Of these 63 deaths, 45 resulted from measles, 9 from whooping-cough, 8 from infantile diarrhœal diseases, and 1 from scarlet fever, but not one from enteric fever, diphtheria, or small-pox. The mean annual death-rate from these diseases last week was equal to 2·7 against corresponding rates of 1·3 and 1·4 per 1000 in the English and Scotch towns respectively. The deaths attributed to measles, which had been 37, 42, and 37 in the three preceding weeks, rose to 45 last week, of which 40 occurred in Dublin and 3 in Belfast. The deaths referred to whooping-cough, which had been 9, 14, and 12 in the three preceding weeks, further declined to 9 last week, and comprised 4 in Cork, 3 in Belfast, and 2 in Dublin. The fatal cases of diarrhœa and enteritis (among infants under 2 years), which had been 8, 10, and 7 in the three preceding weeks, were 8 last week, of which 4 were recorded in Belfast and 3 in Dublin. The death from scarlet fever was registered in Belfast.

The deaths referred to diseases of the respiratory system, which had been 102, 115, and 112 in the three preceding weeks, further fell to 87 in the week under notice. Of the 477 deaths from all causes, 136, or 29 per cent., occurred in public institutions and 8 resulted from various forms of violence. The causes of 15, or 3·1 per cent., of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest; in the 97 large English towns the proportion of uncertified causes did not exceed 0·6 per cent.

A CENTENARIAN.—Mr. John Turner, a hand-loom weaver of Kirkburton, near Penistone, has died in his 101st year.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

Deputy Surgeon-General William Maxwell Craig, C.B., has been promoted to the rank of Surgeon-General in His Majesty's Fleet (dated May 1st, 1914).

Fleet-Surgeon Vidal Gunson Thorpe has been promoted to the rank of Deputy Surgeon-General in His Majesty's Fleet (dated May 1st, 1914).

The following appointment has been notified:—Staff-Surgeon: W. N. L. Cherry to the *Topaze*, on completing.

ROYAL ARMY MEDICAL CORPS.

Supernumerary Lieutenant-Colonel Bertal H. Scott is restored to the establishment, vice C. C. Reilly (dated May 1st, 1914).

Supernumerary Lieutenant Ernest W. Wade is restored to the establishment (dated May 1st, 1914).

Colonel R. S. F. Henderson has been appointed Assistant Director of Medical Services to the Fourth (Quetta) Division. Colonel C. E. Nichol, D.S.O., has been appointed Assistant Director of Medical Services to the Jubbulpore and Jhansi Brigades.

Lieutenant-Colonel J. H. E. Austin has been appointed Medical Inspector of Recruits to the Scottish Command. Lieutenant-Colonel R. H. Penton has been appointed to the Military Hospital at Ranikhet. Lieutenant-Colonel H. N. Dunn has joined at Netley. Lieutenant-Colonel W. L. Gray has been granted six months' leave of absence home from India. Lieutenant-Colonel T. B. Winter has been appointed to hold charge of the Military Hospital at Canterbury. Lieutenant-Colonel N. Faichnie has arrived home from India. Lieutenant-Colonel D. M. O'Callaghan has been transferred from Hilsea to the Dover District. Lieutenant-Colonel J. F. Donegan has been appointed to the Ninth (Secunderabad) Division. Lieutenant-Colonel F. J. Morgan has arrived home for duty from Barrackpore Cantonment. Lieutenant-Colonel B. J. Inniss has been transferred from Mauritius to the Indian Establishment. Lieutenant-Colonel R. Holyoake has embarked for India. Lieutenant-Colonel G. T. Rawnsley has been appointed Deputy Assistant Director of Medical Services to the East Lancashire Division.

Major E. W. Bliss has been appointed to the Eastern Command. Major F. S. Penny has been transferred from Cork to Limerick. Major C. J. O'Gorman, D.S.O., has taken up duty at Barrackpore Cantonment. Major M. M. Lowsley has been transferred from Ambala Cantonment to Kasauli. Major J. Matthews has been appointed to the Northern Command. Major G. J. S. Archer has joined the Military Hospital at Netley. Major A. M. MacLaughlin has been granted six months' leave of absence home from India. Major S. O. Hall has been appointed Specialist in the Diseases of Women and Children to the Burma Division. Major A. W. N. Bowen has been transferred from Belfast to the Curragh Camp. Major W. R. Blackwell has taken up duty in the London District. Major H. D. Packer has been appointed to Karachi. Major W. L. Baker has arrived home from Malta. Major D. L. Harding has been transferred from Londonderry to the Belfast District. Major L. Addams-Williams has joined at Quetta. Major J. G. Churton has been appointed Specialist in Advanced Operative Surgery to the Ninth (Secunderabad) Division. Major J. A. Hartigan has been appointed to hold charge of the Military Hospital at Tientsin. Major G. St. D. Green has been appointed Specialist in the Diseases of Women and Children to the Fourth (Quetta) Division. Major M. W. Falkner has been appointed Company Officer to No. 25 Company of the Royal Army Medical Corps at Bermuda. Major J. F. Whelan has been appointed Deputy Assistant Director of Medical Services to the Sixth (Poona) Division for Sanitation. Major E. W. Slayter has been appointed to hold charge of the Military Hospital at Cahir.

Captain F. C. Lambert has been appointed Specialist in Advanced Operative Surgery to the Sixth (Poona) Division at Headquarters. Captain D. P. Johnstone has been transferred from the Fifth (Mhow) Division to the Second (Rawal Pindi) Division. Captain A. G. Jones has been appointed Staff Surgeon at Headquarters, Rawal Pindi. Captain H. V. Bagshawe has been appointed Specialist Sanitary Officer at Cairo. Captain F. B. Dalgliesh has been appointed to hold medical charge at the Gun Carriage Factory, Jubbulpore. Captain H. J. Crossley has been appointed Specialist in Advanced Operative Surgery to the Seventh (Meerut) Division at Headquarters. Captain R. J. Cahill has been transferred from the Military Hospital at Londonderry to Belfast. Captain F. A. H. Clarke has been appointed to hold charge of the Bacteriological Research Laboratory at Calcutta. Captain J. C. L. Hingston has been appointed Staff-Surgeon to the Rangoon Brigade Headquarters. Captain A. T. Frost has been appointed to hold charge of No. 2 Section Hospital at Poona Cantonment. Captain J. Gilmour has joined the Public Health Department in Egypt. Captain P. Dwyer has been appointed Specialist

in Otology at Dublin. Captain A. H. Heslop has joined at Aldershot. Captain C. T. V. Benson has been granted six months' leave of absence home from India. Captain A. T. Frost has been appointed Specialist in Dermatology and Venereal Diseases to the Sixth (Poona) Division. Captain H. V. B. Byatt has been transferred from the Sixth (Poona) Division to the Fourth (Quetta) Division. Captain C. R. Millar has been transferred from the barracks at Ballincollig to the Military Hospital at Cork. Captain C. V. Carruthers has joined the Royal Army Medical Corps Camp of Instruction at Longmoor. Captain M. Keane has been appointed to hold charge of the military hospital at Calicut Cantonment on transfer from Bulford. Captain W. E. Marshall has been transferred from the Military Hospital at Kinsale to Ballincollig Barracks. Captain O. C. P. Cooke has taken up duty at Queenstown on transfer from the Military Hospital at Cork. Captain P. C. T. Davy and Captain A. Dawson have been appointed to the Royal Army Medical College, Grosvenor-road, for the classes of instruction for promotion to the rank of Major. Captain M. D. Ahern has been appointed to the Military Hospital at Bermuda. Captain A. L. Otway has been appointed to the Portsmouth District. Captain A. C. Amy has taken up duty at the Barracks, Bury. Captain C. P. O'Brien-Butler has been appointed to hold charge of the Military Hospital at Kildare.

Lieutenant H. S. Blackmore has been appointed Specialist in the Prevention of Disease to the Bangalore Brigade and placed in charge of the Bacteriological Research Laboratory at the Military Hospital. Lieutenant W. L. E. Fretz has been transferred from the Third (Lahore) Division to the First (Peshawar) Division of the Northern Army in India. Lieutenant E. B. Allnutt has been appointed to hold charge of the Military Hospital at Purandhur Cantonment. Lieutenant I. R. Hudleston has been appointed to the Military Hospital at Jamaica. Lieutenant H. N. Sealy has been transferred from Kildare to the Military Hospital at the Curragh Camp. Lieutenant H. W. L. Allott has been appointed to the Military Hospital at Bareilly. Lieutenant C. Helm has joined at Dublin. Lieutenant W. P. Croker has been transferred from the Dublin District to the Military Hospital at Newry. Lieutenant J. FitzGerald Gwynne has joined the Royal Army Medical College, Grosvenor-road. Lieutenant R. A. Flood has been appointed to the Woolwich District.

INDIAN MEDICAL SERVICE.

Colonel J. Smyth has been appointed Assistant Director of Medical Services to the Secunderabad Brigade. Brevet-Colonel and Lieutenant-Colonel B. G. Seton has arrived home on leave of absence from India.

Lieutenant-Colonel G. T. Birdwood has been granted seven months' leave of absence. Lieutenant-Colonel F. W. Gee has arrived home on leave of absence from India. Lieutenant-Colonel J. Mulvany has been appointed to officiate as Inspector-General of Prisons in the Bihar and Orissa States.

Major W. D. Ritchie, civil surgeon of Goalpara, Assam, has been appointed to officiate as Civil Surgeon of the First Class. Major H. A. J. Gidney has been appointed Civil Surgeon of the Sylhet District. Major A. F. W. King has been appointed to officiate as Presidency Surgeon. Major W. A. Keys has taken up duty at Ratnagiri. Major L. P. Stephen has been appointed to officiate as Superintendent of the Medical School at Hyderabad. Major P. L. O'Neill has arrived home on leave of absence from India.

Captain G. D. Franklin has been appointed to officiate as Agency Surgeon at Gilgit. Captain H. C. Keates has been appointed Plague Medical Officer at Hoshiarpur. Captain H. Hallilay has taken over charge of the District Jail at Lyallpur. Captain F. A. F. Barnardo has been appointed Superintendent of the Comilla District Jail. Captain L. B. Scott, civil surgeon at Sylhet, has been transferred to the Khasi and Jaintia Hills as Civil Surgeon of that district. Captain H. A. H. Robson has been appointed to officiate as Superintendent of the Central Lunatic Asylum at Berhampore *pro tem.* Captain C. L. Dunn has been granted five months' extension of leave of absence home from India on medical certificate. Captain G. A. Jolly has been granted nine months' leave of absence. Captain A. F. Babonau has been appointed to officiate as Civil Surgeon of the Naga Hills District. Captain W. W. Jeudwine has been appointed Plague Medical Officer to the Jhelum District. Captain C. H. Brodribb has been appointed Specialist in Advanced Operative Surgery.

COLONIAL MEDICAL SERVICES.

West African Medical Staff.—Mr. G. F. Forde has been transferred from the Gold Coast to Nigeria; Dr. J. A. Harley and Mr. S. L. Brohier from the Gambia to the Gold Coast; Mr. J. C. Franklin from the Gambia to Nigeria; and Mr. G. Rollason from Sierra Leone to Nigeria. The following have resigned: Dr. A. Lundie (medical officer, Gold Coast), Dr. E. J. Wyler (medical officer, Nigeria), and Dr. A. Hutton (medical officer, Nigeria). Dr. A. Bremner (medical officer, Sierra Leone) has retired on pension. The following have been selected for appointment to the staff: Dr. T. P. Fraser (Nigeria) and Dr. A. S. Burgess (Gold Coast). The following promotions have been made: Mr. T. Hood from principal medical officer, Nigeria, Southern Provinces, to Director of the Medical and Sanitary Service of Nigeria; Mr. E. A. Chartres from senior medical officer, Gambia, to a Senior Medical Officer (Grade I.) Nigeria; Dr. C. R. Chichester from provincial medical officer, Southern Nigeria, to Senior Medical Officer (Grade I.), Nigeria; Mr. W. H. G. H. Best from provincial medical officer, Southern Nigeria, to a Senior Medical Officer (Grade I.), Nigeria; Mr. C. F. Watson from senior medical officer, Northern Nigeria, to Senior Medical Officer (Grade II.), Nigeria; Dr. W. H. A. Gordon-Hall from medical officer, Northern Nigeria, to a Senior Medical Officer (Grade II.), Nigeria; Mr. W. I. Taylor from senior medical officer, Northern Nigeria, to a Senior Medical Officer (Grade II.), Nigeria; Mr. H. P. Lobb, medical officer, Northern Nigeria, to a Senior Medical Officer (Grade III.), Nigeria; Dr. M. E. O'Dea from medical officer, Southern Nigeria, to a Senior Medical Officer (Grade III.), Nigeria; Mr. W. W. Claridge from medical officer, Gold Coast, to a Senior Medical Officer (Grade III.), Gold Coast; Dr. A. E. Horn from personal assistant to the principal medical officer, Southern Nigeria, to Senior Medical Officer (Grade III.), Gambia; and Dr. J. M. Dalziel from medical officer, Northern Nigeria, to a Sanitary Officer, Nigeria.

Other Colonies and Protectorates.—Mr. N. S. Williams has been selected for appointment as a temporary Medical Officer in Uganda; Dr. J. H. Paterson as a Supernumerary Medical Officer in Jamaica; Mr. C. H. Sills and Dr. S. Vassallo as Supernumerary Medical Officers in the Leeward Islands; Mr. W. A. S. George as a District Medical Officer in St. Vincent; and Dr. H. P. Hacker as a Supernumerary Medical Officer in the Federated Malay States.

SPECIAL RESERVE OF OFFICERS.

Royal Army Medical Corps.

The undermentioned Captains, Army Medical Reserve, to be Captains, retaining their rank and seniority (dated May 1st, 1914): John Findon Murphy and Murray Ross Taylor.

Lieutenant Vivian R. Smith resigns his commission (dated May 6th, 1914).

Cadet John Alston, from the Glasgow University Contingent, Officers Training Corps, to be Lieutenant (on probation) (dated April 6th, 1914). Cadet Charles Robertson McIntosh, from the Glasgow University Contingent, Officers Training Corps, to be Lieutenant (on probation) (dated April 8th, 1914). John Cameron to be Lieutenant (on probation) (dated April 9th, 1914).

Army Medical Reserve.

Captain Samuel K. Adams is removed on completion of the period of service prescribed by Article 641, Royal Warrant for Pay and Promotion, 1907 (dated April 30th, 1914).

Lieutenant Alfred S. Millard is removed on completion of the period of service prescribed by Article 641, Royal Warrant for Pay and Promotion, 1907 (dated Jan. 31st, 1914).

TERRITORIAL FORCE.

Royal Army Medical Corps.

2nd West Lancashire Field Ambulance, Royal Army Medical Corps: Lieutenant-Colonel Thomas Stevenson.

3rd North Midland Field Ambulance, Royal Army Medical Corps: Supernumerary Lieutenant William Boyd is absorbed into the establishment (dated Jan. 21st, 1914).

Major Edgar Thomas Inkson, V.C., Royal Army Medical Corps, to be a Deputy Assistant Director of Medical Services of a Territorial Division (dated April 25th, 1914).

For Attachment to Units other than Medical Units.—Frank Harris White to be Lieutenant (dated April 17th, 1914).

Attached to Units other than Medical Units.—Lieutenant Leonard Colebrook to be Captain (dated April 3rd, 1914). Major David Middleton Greig, attached to the 2nd Highland Brigade, Royal Field Artillery; Major Samuel Lodge, attached to the 6th Battalion, The Prince of Wales' Own (West Yorkshire Regiment); Major Thomas Forrest, attached to 7th Battalion, The Cameronians (Scottish Rifles); Major James Duncan Farquharson (unposted).

THE TERRITORIAL DECORATION.

The King has conferred the Territorial Decoration upon the undermentioned Officers of the Territorial Force: Lancashire (Fortress) Engineers, Royal Engineers: Surgeon-Major John Wesley Lloyd.

ROYAL ARMY MEDICAL COLLEGE.

On May 1st Lieutenant-General Sir James Grierson presented the prizes at the Royal Army Medical College to the junior class of the twenty-fourth session, in the presence of a large gathering of officers, visitors, and ladies. Colonel B. M. Skinner, commandant of the school, was supported by Major-General Sir Francis Lloyd, Surgeon-General Sir Launcelot Gubbins, Surgeon-General Sir Arthur

Sloggett, Surgeon-General Cuff, Surgeon-General Whitehead, Surgeon-General Trevor, Surgeon-General Bassett-Smith (of the Naval School, Greenwich), Sir Ronald Ross, and others. Colonel Skinner, in the opening remarks, said that the course of instruction at the Royal Army Medical College was constructed to bear essentially on the health and training of the soldier. He said the results of the examinations had been very gratifying, and that special instruction had been given also in administrative methods. General Grierson, in presenting the prizes, told the students that they were joining one of the finest branches of the service, and one which had developed more than others in recent years. They had only to compare what took place in the Crimean war with what was done in South Africa to realise the great advances made in the medical service of the army. The present medical organisation was extended also to the Territorial Forces. He emphasised the double aspect of the army medical officer, who was both a soldier and a doctor, and reminded them that their purely professional and technical duties were secondary to their duties as soldiers and officers of the King. This meant double work for them. Surgeon-General Gubbins, in proposing a vote of thanks to General Grierson, emphasised the value of his words as coming from one of wide knowledge and experience of home and foreign armies. After the prize distribution Colonel Skinner and the officers of the Royal Army Medical Corps entertained their visitors in the officers' mess.

INDIAN MEDICAL SERVICE DINNERS.

The annual London dinner of the Indian Medical Service will be held at the Hotel Cecil on Monday, June 8th, at 7.45 P.M. The Edinburgh dinner of the Indian Medical Service will be held on May 29th at the Caledonian United Service Club, when Sir Alexander Christison, Bart., will preside. Application for tickets should be made to Colonel Arnott, 8, Rothesay-place, Edinburgh.

The Senate of Glasgow University have decided to confer the honorary degree of LL.D. upon Colonel Sir William B. Leishman, professor of pathology at the Royal Army Medical College.

Home and Foreign Notes.

(FROM OUR OWN CORRESPONDENTS.)

MANCHESTER.

National Insurance Act: The Payment of the Panels.

THE Manchester Insurance Committee have decided to make a payment to the medical men for the first quarter of this year at the rate of 40 per cent. on the accounts sent in. This will use up £15,771. The committee retained 25 per cent. of the medical credits at the end of last year in order to meet any substantial claims by the chemists in respect of over-prescribing. The chemists have formulated their claims, and it appears that the committee will have a balance of £7761 to allocate amongst the doctors.

Hospital Matters in and about Manchester.

The Ancoats Hospital, which is situated in a densely populated part of Manchester and adjacent to many public works, is making an appeal for £450 for sanitary improvements and for the construction of a new ward at the cost of £2500. In an appeal which has been issued by the chairman it is stated that the present 114 beds are totally inadequate to deal with the proportion of the 33,000 cases per annum which require indoor treatment, and the effect of the National Insurance Act has been to reveal much suffering hitherto unrelieved through fear of incurring expense. At the annual meeting of the St. John's Hospital and Manchester Ear Hospital the authorities have noticed since the Insurance Act came into operation a very great increase in serious cases. Not so many patients passed through the beds, but they remained longer, because they were more serious cases sent by the doctors for treatment which was not provided for under the Insurance Act. The governors of the Ashton, Stalybridge, and Hyde District Infirmary have decided to enlarge their hospital at an outlay of £25,000. For this purpose additional land is required, and the estate trustees of Lord Stamford will give three acres subject only to the repayment of the cost of road-making. Lastly, the fund for the Central Branch of the Royal Infirmary has now reached £19,520, £567 having been received since the last meeting of the board of management. Mrs. George A. Southam, of Hale, Cheshire, has generously offered to provide the sum of 50 guineas per annum towards the payment of a pathologist or assistant pathologist, and intends to set aside the capital sum, duly secured to the hospital, to provide this income. The bequest will be known as the "Southam Pathological Bequest." There is general evidence that Manchester people intend to help their medical charities in these critical times.

A Home of Recovery for Children.

A small committee has established a home at Heptonstall, near Hebden Bridge, where a number of weak and ailing children are given a prolonged holiday to nurse them back to health, most of them outcasts from our system of medical treatment because they have no direct illness which would entitle them to hospital benefit. They are the children of the slums of Hulme and Ancoats, where delicate children have no chance to grow up healthily. The children live an outdoor life, are taught what will be useful to them, and encouraged to work and play in the open air. The building stands among the moors, 900 feet above sea level. The establishment is supported by private contributions, and an appeal is being made for funds to continue the work.

Radium for Manchester and Salford Hospitals

I referred recently to the Radium Fund. The general committee have now issued a complete scheme and an appeal for funds. The sum required is £25,000 for the purchase of radium and radio-active materials. In all seven hospitals in Manchester and Salford will participate in the scheme. The radium and mesothorium when obtained will be deposited at the Royal Infirmary, where patients will be sent for treatment. The radium committee intend to appoint a physicist to give his whole time to the work of the radium department, and an expert radiologist to advise as to the line of treatment, dosage, &c., and to conduct treatment when necessary.

May 5th.

BIRMINGHAM.

General Hospital: Resignation of Sir Robert M. Simon.

A CONSIDERABLE change is taking place in the *personnel* of the staff of the General Hospital. Two years ago Dr. Robert Saundby, senior physician, and Sir Thomas Chavasse, senior surgeon, resigned their posts after many years of faithful service. Now the hospital is about to experience another great loss by the resignation of the present senior physician, Sir Robert Simon. Other important changes must take place during the next few years owing to the operation of the time limit. At a meeting of the board of management on May 1st the following resolution was unanimously passed:—

That the board of management have received with great regret the resignation of Sir Robert M. Simon, senior honorary physician, and desire to record their high

appreciation of the very able manner in which he has discharged his duties as honorary physician for the past 23 years, of the great skill and attention he has devoted to the patients under his care, and of the interest he has taken in the welfare of the institution. That the resignation of Sir Robert M. Simon be accepted with great regret, that the office of honorary physician be declared vacant, and that steps be taken to fill the vacancy on Friday, May 22nd, 1914, at 12 o'clock noon. That a subcommittee be appointed to consider what steps should be taken to commemorate Sir Robert M. Simon's services to the hospital, and that at the next meeting of governors it be recommended that in consideration of the eminent services rendered to the hospital during the past 35 years by Sir Robert M. Simon he be appointed honorary consulting physician to this hospital.

Sir Robert Simon came to Birmingham as assistant physician to the General Hospital after three years' very successful work as honorary physician to the Manchester Southern Hospital for the Diseases of Women and Children. In 1891 he was elected honorary physician. He became a Fellow of the Royal College of Physicians of London in 1895, and was knighted in 1910. Since 1910 he has been professor of therapeutics in the University of Birmingham and has held the post of professor of forensic medicine at Mason's College. He is consulting physician to many local hospitals.

Conference of Nurses.

The annual conference and nursing exhibition convened by the National Council of Nurses will be held in the New Central Hall, Birmingham, from June 9th to 12th. Mr. H. Gilbert Barling, Vice-Chancellor of the University of Birmingham, and Miss Rogers, late matron of the Royal Infirmary, Leicester, will present the case for nurses' registration. Mrs. Bedford Fenwick will speak of the Nurses' International Memorial to Miss Florence Nightingale. Miss Musson, matron of the General Hospital, Birmingham, will be the chief speaker in the economic section, and there are quite a number of questions to be discussed in connexion with it. Sir Victor Horsley will advocate the necessity for nursing as part of medical benefit for insured persons, and several topical questions will be brought forward.

Medical Work in Schools.

Dr. G. A. Auden, the school medical officer, in his report for 1913 states that two notable advances were made in the direction of treatment—viz., the initiation of dental treatment and of a scheme for the operative treatment of tonsils and adenoids.[1] The scheme for the erection of a properly equipped central school clinic in Great Charles-street has received the sanction of the Board of Education and the land has been bought. The treatment of certain minor external ailments has been begun and the staff of nurses increased. The development of this scheme of treatment may be said to mark the close of the first phase of the evolution of the school medical service. Since 1908 there has been a regular sequence of effort—viz., (1) medical inspection of children on entering and leaving school; (2) following up of individual children found defective and facilities for special examinations at the clinics and in the schools; (3) the special recording of tuberculous, epileptic, physically handicapped, and ringworm cases; (4) treatment for eye defects, teeth defects, tonsils and adenoids, ringworm, and external minor ailments; (5) the general guidance in the choice of suitable work on leaving school. The number of children inspected in each year was as follows: 1908 (September to December, with three officers), 9404; 1909, 26,484; 1910, 24,363; 1911 (three full-time and three part-time officers), 28,067; 1912, 34,224; 1913, 32,376; giving a total of 154,918. Dr. Auden thinks that the next stage of development must be coöperative and that every effort must be made to correlate the medical work, not only with the march of educational administration, but also with all the ameliorative agencies which are already dealing with child life. The percentage of parents who were present at the examination of their children was 72. The defects discovered during 1913 were: Defects of vision, all causes, 3265; squints, 969; corneal ulcers, opacities, and keratitis, 308; defective hearing, 1084; otorrhœa, 666; tonsils and adenoids, 2550; certain phthisis, 100; doubtful phthisis, 215; other lung diseases, 645; heart disease, congenital 93, acquired 489; chorea, 85; epilepsy, 83; hernia, 81; speech defects, 225; deformities (excluding paralysis) 277; ringworm, 243; and skin disease, 372.

May 5th.

[1] THE LANCET, Jan. 10th, 1914, p. 132.

SCOTLAND.

Interesting Legal Judgment.

THE House of Lords recently gave judgment in an appeal case brought by the widow of a Rutherglen miner. The man, who had been sweating at his work, caught cold while waiting at a mid-landing in the mine until men from the lower seam had been raised. This developed into pneumonia, which proved fatal. The sheriff found that the man had died from the effects of injuries by accident received at his work, and allowed compensation. The Second Division, however, recalled this award, and found the present respondents entitled to expenses. The House of Lords restored the finding of the sheriff (acting as arbitrator), Lord Shaw of Dunfermline making a statement.

Edinburgh Corporation and the Veterinary Department.

There is a scheme before the authorities proposing to set up a separate veterinary department in the city. At present there are four veterinary surgeons who carry out this work of the corporation, acting on the instruction and under the supervision of the medical officer of health. A report just issued states that the work did not include any of the duties to be discharged by a veterinary surgeon under the supervision of the Contagious Diseases (Animals) Act. A considerable amount of veterinary work was required in connexion with the stud of horses for the cleansing department. This work was carried out by the professors of the Royal Dick Veterinary College, under an arrangement with the corporation. With the exception of the senior veterinary officer, the maximum salary of each of the veterinary surgeons on the staff was at present £175 per annum. The maximum salary of the senior veterinary officer was at present £200 per annum. The subcommittee was of opinion that the veterinary work of the corporation was so intimately connected with the public health work of the city, particularly as regards the meat and milk supplies, that it was of great importance that it should be carried out under the direct administration, supervision, and control of the medical officer of health. It appeared to be desirable that a considerable amount of responsibility and initiative supervision should rest with the senior veterinary officer, and the committee recommended that the appointment should

be made on recommendation to the medical officer of health, with the approval of the town authorities. Among the more important duties of this "senior veterinary officer" would be inspecting the city byres, the milk-supply where necessary, attending the slaughter-houses while slaughtering operations were being carried out, and the general meat and food inspection in the market, railway stations, and shops.

Housing Conditions at Rosyth Naval Base.

On account of recent interest excited in this subject, the annual report of Dr. A. S. Gordon, medical officer of health, is of importance. Dealing with the housing question, he states that since the report of Dr. T. F. Dewar and Mr. Wilson, of the Local Government Board, the housing conditions available at the naval base had very materially improved. At that time it was stated that the navvies temporarily housed within the borough of Inverkeithing were accommodated in a satisfactory manner, to which little or no exception could be taken. In 1911 a new model lodging-house, with 152 beds, was completed, and until recently that building had not been fully occupied. In April, 1913, the White House Hotel was opened. That house, which provided accommodation for 300 men of the better class of workmen, had not been fully occupied until the end of November, 1913. Since the report by these representatives of the Local Government Board new houses and tenements had also been completed and occupied. The demand had also been relieved by the erection of huts at Rosyth, and the running of special trains to Dunfermline. It had been found that the demand for ordinary houses of one-room and kitchen, or two rooms and kitchen, had much diminished. Houses of a larger and better type—four rooms and kitchen—were now found to be in request. A considerable number of workers at the paper mill had been thrown out of employment by a disastrous fire, and as many then left the district more accommodation was available for the Admiralty workers. For the better control and the prevention of overcrowding, by-laws for houses let as lodgings had been adopted. The appointment of an additional sanitary inspector, who also acted as borough surveyor, should also prove an advantage.

Work of the Edinburgh Insurance Committee.

A report has been prepared by the clerk on the administrative work of this committee from July, 1912, to April, 1914. As there is an unexpended balance in the drug fund a substantial bonus will shortly be paid over to the local panel chemists. Of 21 complaints brought against practitioners on the panel only six were upheld. For insurance service work the incomes of panel practitioners were as follows:—

Over £900	1	Over £300	12
,, 800	1	,, 200	15
,, 700	4	,, 100	16
,, 600	7	,, 50	4
,, 500	10	Under 50	39
,, 400	12		

The highest number of insured persons on any one list was 2903, the lowest being three. The highest amount paid to any one practitioner was £988 13*s.*, and the lowest amount was 8*s.* 8*d.* Since the commencement of the medical benefit to the present time practitioners on the panel have received £39,981.

Accommodation of Phthisis Patients in Glasgow.

Negotiations have been taking place recently between the corporation of Glasgow and Govan parish council with regard to the treatment of patients suffering from phthisis. A deputation from the corporation subcommittee visited Merryflatts hospital, which belongs to the parish council of Govan, and after inspecting the various buildings, suggested that the parish council should place at the disposal of the corporation the recently erected phthisis wards, or as many of these as might be found necessary, together with the adjoining chalets. After considering the matter the parish council, for administrative and other reasons, have decided not to hand over these, but will enter into a temporary arrangement with the corporation for boarding their patients to the extent of the accommodation available.

Dundee Panel Committee and Medical Grievances.

The Dundee Panel Committee have entered a protest to the Insurance Committee against the system whereby the medical profession were being penalised for all the defects arising in every department in the administration of medical benefit. They also urge the delivery of a medical card to every insured person; otherwise, in view of the difficulties which have arisen, they will feel it their duty to advise practitioners to refuse medical attendance to any person who does not produce such a card. 12,000 of the new medical cards had been returned undelivered, and on the cards which had been delivered the entry of the doctor's name had been erroneous in a great number of cases, and it was within the knowledge of the committee that insured persons who had been aggrieved by these mistakes found difficulty in having them corrected. The responsibility for the medical benefit of insured persons had not been removed from the doctors; but owing to these mistakes a large number of insured persons entitled to medical benefit were for the time being removed from the doctors' lists. These lists, which had not yet been delivered, and which were the doctors' only warrant for payments, had thus been seriously lessened, although the doctors' responsibilities had in no way diminished. The grievance had been further aggravated by the instructions issued that an insured person who furnished the clerk with what he considered sufficient evidence of being entitled to medical benefit had to be provided with a medical card, although he had not been authenticated officially by an index slip, without which the clerk had no guarantee for a credit to the cost of that person's medical benefit as an individual. The committee felt bound to put before the Insurance Committee a demand that, as stipulated by the agreement, payment be made for every medical card issued, whether the insured person had been duly authenticated or not.

May 5th.

IRELAND.

The British Medical Association and Ireland.

As was anticipated, the increase of the subscription to the British Medical Association has caused a definite diminution in the number of members in Ireland. Recently it was as high as 1000, but it has now fallen to 756. The Council, having considered the matter, has decided to open an office in Ireland in order to organise the profession of Ireland under the Association. A whole-time medical secretary has been appointed to take charge of the office. The task is not likely to be an easy one, though the Council has been fortunate in securing the

services of a gentleman who possesses considerable influence with the profession, particularly in the country districts. At present the representative body of the profession in Ireland is the Irish Medical Committee, which is formed mainly of delegates from the several Local Medical Committees. It is a strong body, possessing the confidence of the whole profession, but it is admitted that its financial basis is weak. Since its formation the Irish Medical Association and the British Medical Association have recognised it as the representative committee of the profession. It seems, however, as though the British Medical Association were now about to demand for its Irish Committee a representative status. The problems of Irish medical politics will not, I fear, be rendered simpler by the new move of the British Medical Association.

Dublin Corporation Tuberculosis Hospital.

At its last meeting the Dublin corporation proceeded to the election of two visiting physicians for the tuberculosis hospital on the Pigeon House-road. Prior to the corporation taking over this institution a few months ago it was managed by the Women's National Health Association for several years under the name of the "Allan A. Ryan Home Hospital." For the greater part of the time that it was in the hands of the association two gentlemen gave their services voluntarily as visiting physicians. They were both candidates for the posts in the service of the corporation, but their applications were passed over. A legal point was raised at the election as to whether such appointments should be made by the corporation itself or by the tuberculosis committee. The Act of Parliament seems to be clear that the entire management of tuberculosis hospitals is in the hands of the committee. The town clerk, however, advised that the election rested with the corporation. The point is not of immediate importance, since the tuberculosis committee, as at present constituted, consists of all the members of the corporation.

Irish Workhouses.

During the year ended Sept. 30th, 1912, the amount spent on Poor-law in Ireland was £1,012,230, and to this must be added £269,655, the expenditure under the Medical Charity and other Acts, giving a total of £1,281,885. In the previous decade the corresponding figures were: Poor relief £965,720 and medical charities £210,166, producing a total of £1,175,886. Judging by unions, the largest union in Ireland is the South Dublin, where the daily average number of inmates was 3914. Belfast comes next with 3233, and North Dublin is third with 2309. This makes a total for Dublin of 6223, compared with Belfast's 3233. The average cost of in-maintenance per head per week in the South Dublin union is 4*s.* 9*d.*, in the North Dublin 4*s.* 2*d.*, and in Belfast 4*s.* 0¾*d.* In 1895 the figures were: South Dublin 3*s.* 5¾*d.*, showing an increase of 36½ per cent., to 4*s.* 9*d.* in 1912; North Dublin 3*s.* 3¼*d.*, showing an increase of 27½ per cent., to 4*s.* 2*d.* in 1912; Belfast 3*s.* 1¼*d.*, showing an increase of 31 per cent., to 4*s.* 0¾*d.* in 1912.

Infectious Diseases in Belfast.

Between March 16th and April 18th, 1914, 263 cases of infectious disease have been notified in Belfast, including 8 cases of typhoid fever, 33 of diphtheria, and 197 of scarlet fever; 19 cases of pulmonary tuberculosis have also been notified. In the previous five weeks 268 cases of infectious disease were notified, and 186 in the corresponding period of last year. It is remarkable how the scarlet fever epidemic still continues in Belfast. Notification, isolation, and hospital treatment all seem to have no effect in lessening its occurrence.

Dr. J. S. Darling.

Dr. J. S. Darling, who has been for the past 24 years medical officer of the Lurgan workhouse, was on April 30th at a specially summoned meeting of the Lurgan board of guardians unanimously granted an increase of £50 per annum to his salary. To his numerous medical friends this recognition, though tardy, of Dr. Darling's services has given the utmost satisfaction. Dr. Darling takes a keen interest in the scientific advancement of medicine and surgery.

May 5th.

PARIS.

The Dangers of Methylated Spirits in Iodine Disinfection.

IODINE disinfection is largely employed in France to-day, especially for the operator's hands. About 10 c.c. of tincture of iodine are put into half a litre of alcohol, and the surgeon rinses his hands therein, often in the operating theatre itself, before beginning to operate. At the Hôpital de Clermont-Ferrand, in the service of Professor Bousquet, serious accidents have occurred owing to the substitution by the hospital administration of "denatured" alcohol (methylated spirits) for pure alcohol, on account of its much lower cost, the tax being greatly reduced on the denatured kind. From the time that this was substituted it was observed that irritant vapours were disengaged from the solution as soon as the administration of chloroform began, which caused tingling of the eyes and nostrils, cough, and suffocation in all present in the operating theatre. It seemed as though some gaseous combination was formed between the vapours of iodine, methylated spirits, and chloroform. Even the anæsthetised patients were affected, and two patients in succession were seized with serious syncope, necessitating rhythmic tongue traction and artificial respiration for their recovery, while a subsequent patient died, notwithstanding the practice of these measures. The suppression of denatured alcohol was then decided on, and pure alcohol was again used, when these accidents ceased. Dr. Pakowski, who reports these cases, concludes that methylated spirits must not be used, or at least that the rinsing of the hands must be carried out with it in a room shut off from the operating theatre and well ventilated.

Measures against Leprosy.

The Académie de Médecine has voted the following administrative measures against the spread of leprosy in France: (1) Leprosy to be made compulsorily notifiable; (2) lepers to be submitted, according to circumstances, to either special surveillance or isolation; (3) foreign lepers not to be allowed to land in France; (4) a special Commission, constituted as laid down in the Bill before Parliament, to decide upon each case; (5) the academy cannot deal with the prophylaxis of leprosy in France without urging on the public authorities the necessity for rigorous and indispensable measures to control the diffusion of leprosy in the colonies and protectorates, which are infinitely more menaced than France itself. M. Gaucher extolled the total interdiction of French

territory, at home and in the colonies, to foreign lepers, the isolation in an island off the coast of French lepers who had been infected in the colonies, and a distinction between these last, who are particularly dangerous from the point of view of contagion, and the autochthonous lepers of the Mediterranean littoral or of Cantal, in whom the leprosy is attenuated and comparatively harmless.

The Wassermann Reaction in Medical Jurisprudence.

Accepted views as to the relation between general paralysis and syphilis seem likely to provide lawyers with a further argument which can be invoked in a plea of irresponsibility. Last year a very enterprising business man, who had simultaneously floated a large number of diverse industries, was arrested at the suit of his numerous dupes. Many millions of francs had been swallowed up in his undertakings. He is at present in prison, and his lawyers are now demanding his release on the ground of irresponsibility. They contend that his feverish activity, the multiplicity of his unrelated enterprises, and his insurmountable optimism are stigmata of general paralysis. In support of their views they have had the Wassermann test applied to their client, and it has proved positive. The court has appointed experts to decide whether the Wassermann reaction is really sufficient ground to establish irresponsibilty in a case of fraud involving many millions.

The International Conference Against Alcoholism.

The International Conference Against Alcoholism met in Paris last week at the Musée Social, under the presidency of Professor Debove. Dr. Lauer proposed the establishment of an international institute for the scientific study of the subject. M. Aubert discussed the relations between anti-alcohol societies and other social works, such as the fight against tuberculosis, infant mortality, and unhealthy dwellings. M. Duteuil and Dr. Hartford, of London, discussed the anti-alcohol warfare in the colonies. M. Filassier, head of the statistical bureau of the city of Paris, demonstrated the incompleteness of statistics based upon the returns of the fiscal administration. He showed that in France the privilege of the "bouilleurs de crus" causes a formidable margin of doubt, for it allows all producers of fermented liquors to distil, without any control or account thereof taken, the product of their crop, nominally for personal consumption. This product is often fraudulently sold, so that the alcoholic consumption is really much greater than is shown by revenue statistics, and it can be easily demonstrated by medical statistics that the departments in which this privilege is in force are those that furnish the greatest number of alcoholic subjects, and of diseases caused or aggravated by the abuse of alcohol.

May 4th.

VIENNA.

University of Vienna.

THE programme of lectures during the summer term in the medical faculty of the University of Vienna has just been published, and the following items may be mentioned as being of interest. There will be 429 lectures and classes as compared with 416 last summer term, the subjects and the number of classes being as follows: In anatomy and histology, 8 classes, conducted by 3 professors and assistants; in physiology, 13 classes, with 6 professors or lecturers; in medical chemistry, 10 classes, with 3 lecturers; in general pathological anatomy and pathology, 27 classes, with 20 professors and lecturers; in pharmacology, 10 lectures, delivered by 6 teachers; in internal medicine, 98 classes, with 64 teachers; in laryngo-rhinology, 19 classes, with 9 teachers; in pediatrics, 22 classes, with 15 teachers; in surgery, 33 classes, with 24 teachers; in dentistry, 8 classes, with 6 teachers; in otology, 29 classes, with 13 teachers; in ophthalmology, 22 classes, with 11 teachers; in gynæcology, 43 classes, with 26 teachers; in dermatology, 42 classes, with 24 teachers; in psychiatrics, 24 classes, with 18 teachers; and in forensic medicine and hygiene, 17 classes, with 8 teachers. The teachers include 29 ordinary professors, 99 extraordinary professors, and 132 *privat-docenten* and assistants. These classes are meant chiefly for students, but of course they may be attended also by graduates. The above-mentioned programme being an official document, post-graduate work is as a rule not included in it, but is in Vienna conducted more or less on a system of free arrangement. In the last (i.e., the winter) term there were 2818 matriculated students, including 184 women, working in the institutes of the medical faculty. The number of students has increased by 313 over the number in the corresponding term of last year, and the number of female medical students has gone up by 32. As I have already mentioned on a former occasion, the chief increase is produced by the first-year students entering the medical classes in rapidly rising numbers.

Health Statistics for March.

The official report of the Vienna Board of Health for the month of March shows that the public health was excellent, owing to the mild weather, which produced a marked diminution of diseases of the air passages. Scarlet fever alone showed a drop of 50 per cent. and in other infectious diseases there was also a decided change for the better. The mortality decreased by 15 per cent. (2964 deaths against 3378) in comparison with the same period of 1913. Of the deceased 48 per cent. were females and 52 per cent. were males, whilst the infants under one year made up 18 per cent. of all the deaths.

May 4th.

INDIA.

College of Science at Calcutta.

THE foundation-stone of a College of Science in connexion with the Calcutta University was laid recently by Sir Ashutosh Mookerjee, Vice-Chancellor of the University, who in performing the ceremony said that the scheme was first rendered practicable through the execution of a trust deed by Sir Tarak Nath Palit, whereby he transferred money and land valued at more than 7 lakhs for the promotion of pure and applied science among his countrymen. A few weeks later Sir Tarak Nath Palit executed a second deed of a similar amount for the purpose of aiding the trusts mentioned in the first deed. The University Syndicate had received the Government's permission to apply Rs.12,000 annually for the maintenance of the laboratory, and Dr. Rash Behary Ghose had offered 10 lakhs for the foundation of four professorships and eight research studentships.

Calcutta Hospital Nurses' Institution.

The report of the Calcutta Hospital Nurses'

Institution for 1913, just published, shows a loss on the working of the year of Rs. 4,081.11.6. The income of the institution is mainly derived from public grants from the Government of Bengal, the corporation of Calcutta, the Hospital Port Dues Fund, and additional fees from the Woodburn Ward of the Presidency General Hospital. During 1913 there was a falling off in the subscriptions from the public and also in the offertories from the churches. The main object of the institution is to train nurses and to provide them free of charge to the leading Calcutta hospitals, about 170 nurses being now employed.

School of Tropical Medicine.

According to the *Englishman* a serious difficulty has arisen over the staffing of the proposed School of Tropical Medicine. The Government wishes to staff it mainly, if not exclusively, with Indian Medical Service officers, while Lieutenant-Colonel Leonard Rogers, I.M.S., desires to engage a staff of experts of established reputation. Colonel Rogers is said to have intimated to the Government that unless the original scheme is adopted he can have nothing to do with the proposed school, and it is believed that he is prepared to resign.

Strike of Bombay Milkmen.

The new by-laws made by the Municipal Commissioner for the purpose of controlling the milk trade of Bombay with the view of supplying the city with pure and unadulterated milk have just come into force. These by-laws require all the owners of dairy farms and milch cattle, milk shopkeepers, hawkers, and servants of dealers in milk who supply milk to the customers at their places to procure licences from the Municipal Commissioner. The by-laws provide for the control and supervision of premises used for keeping milch cattle for sale or hire, or for sale of the produce thereof; also for inspection of such cattle, and for securing the cleanliness of milk stores, milk shops, and milk vessels. Though only nominal fees are charged for licences the owners of about a dozen dairies recently issued a combined notice to their customers intimating that in view of the new by-laws coming into force they had been obliged to raise the price of milk from 3 annas to 3½ annas from April 1st. Disputes between the milkmen and their employers have resulted in the former refusing to deliver milk to the customers, and a large section of the people are being put to no small amount of inconvenience owing to the non-supply of milk.

Sanitation in the Civil Station of Lahore.

A correspondent of the *Civil and Military Gazette* seriously indicts the sanitation of the capital of the Punjab. He says that the sanitary arrangements of the Lahore Civil Station are so defective as to call for the personal intervention of the householder in the interest of his own health and that of the public. There is no daily removal of refuse, but accumulation of filth is permitted for two or even three days; at the end of this time a cart calls usually about 8.30 A.M. Into this cart, which is an ordinary bullock cart, with reed matting sides and without any cover, the contents of the sanitary bins are thrown in a most careless manner. The bins are thus never completely emptied and they are never cleansed. The process of removal, which takes place about breakfast time, is therefore a most offensive proceeding, and the carts themselves being wholly unfitted for such work leave a foul odour and a trail of filth in their path. The writer suggests that the civil station should be wholly or in part removed from the jurisdiction of the Lahore municipal committee and placed in the hands of a committee composed entirely of residents in the civil station. There are probably objections to this proposal, but so far as sanitation is concerned there is much to be said in favour of its adoption.

The Students' Strike at Lahore.

The committee to inquire into the alleged grievances of the students at the Lahore Medical College met on April 5th under the presidency of Surgeon-General Sir Pardey Lukis, I.M.S.

April 14th.

AUSTRALIA.

Melbourne University.

A DEPUTATION from the council of the Melbourne University recently waited upon the Premier of Victoria (Mr. Watt) with a request for increased Government aid to the finances of the institution. It was stated that many of the buildings were in serious disrepair and that the various schools required financial aid to provide for expansion of work. While the Sydney University has handsome private endowments the Melbourne University is practically dependent upon the sympathy of the Government. Upwards of £150,000 was mentioned as necessary to make matters perfectly satisfactory. Mr. Watt replied sympathetically, and promised to make inquiries by sending an architect to report upon the building propositions and to take the other representations into Cabinet consideration.

The Women's Hospital, Melbourne.

At a recent meeting of subscribers to the Women's Hospital, Melbourne, some feeling was manifested. This institution has a midwifery and a gynæcological department. There are four honorary medical appointments to the first and eight to the second, the latter being divided among four indoor surgeons and four assistant surgeons with charge of out-patients. The customary rotation of office has been from the midwifery appointments to the gynæcological. Recently there has been professional unrest among the operating surgeons owing to the demand for one or more beds by the assistant surgeons. As a solution the committee proposed to increase the number of surgeons from four to six in the gynæcological department. This was opposed by a certain number of the existing senior surgeons, and matters promised to be lively at the meeting called for the necessary alteration of the rules. However, the opposition proved to be lacking in determination, and the proposals of the committee were adopted without serious dissension.

Melbourne Hospital.

The Melbourne Hospital until recently had no special departments except that of dermatology. When the new building was opened appointments were made to departments for diseases of the eye and of the throat and nose. It is now announced that a gynæcological department will be opened, and applications have been invited for the position of gynæcologist to the hospital.

St. John Ambulance Association, Melbourne.

Dr. J. W. Springthorpe, in opening the new headquarters of this association at 463, Swanston-street, Melbourne, said they undertook ambulance work in Melbourne in 1908 after other authorities had refused. Last year there were 25,000 calls, and

there were now five cars constantly at work. They received no Government grant and only £123 from municipalities. Last year they transported £800 worth of municipal cases. The deficit on the year's work was £476, and a fourth motor ambulance had been ordered, but towards the cost of this several donations had been received. A sum of £250 was still required. The Lord Mayor declared the building open, and said that 15,468 persons in Victoria had received certificates of proficiency in first aid.

Presentation Portrait.

One of the permanent memorials of the jubilee of the Melbourne Medical School, which will be celebrated on April 30th and May 1st, will be a portrait of Professor Sir H. B. Allen, to be hung in the Wilson Hall. The portrait has been completed by Mr. E. Phillips Fox, a well-known Australian painter, and is pronounced to be an excellent likeness. The cost of the picture is being met by a number of graduates of the medical school.

Small-pox in Sydney.

Small-pox has not yet disappeared in New South Wales, and there are at present about 25 cases and a number of contacts at the quarantine station. Cases are also reported from Newcastle. Some inconvenience has been caused by the arrival of the *Orsova* with a case of small-pox from Colombo, and the ship's company have had to be accommodated at the quarantine grounds. The New South Wales Government decline to pay a sum of £6000 claimed by the Federal Government for the use of the quarantine station during the past nine months

The Australasian Medical Congress.

Considerable discussion took place at the final meeting of the recent Australasian Medical Congress in Auckland on a motion recommended by the council of the New Zealand branch of the British Medical Association, viz.: "That membership of future congresses be limited to members of the British Medical Association." The reasons given in support were the overlapping in the work of the two bodies, and the necessity of remitting congress resolutions to the branches of the British Medical Association. The motion was proposed by Dr. W. Young (Wellington), and seconded by Dr. J. R. Purdy (Wellington). It was supported by Dr. R. Worrall (Sydney) and Dr. Sinclair Gillies (Sydney), and opposed by Dr. F. A. Pockley (Sydney), Hon. Dr. Nash (Sydney), and Dr. T. Dixson (Sydney), who argued that the motion, which was brought without notice, if carried would certainly alienate the sympathy of every State Government from future meetings of congress, since there were a number of reputable practitioners who were outside the British Medical Association. An amendment "that future congresses be congresses of the British Medical Association" was carried.

April 2nd.

ROYAL SANITARY INSTITUTE.—A sessional meeting of this institute will be held at St. Helens on May 22nd, when a discussion will take place on the Hygiene of the Preparation, Storage, and Distribution of Food, to be opened by Dr. H. Joseph Cates, medical officer of health of St. Helens. The following medical men are expected to take part in the discussion:—Mr. T. W. Naylor Barlow, Mr. Joseph Beard, Mr. H. E. Corbin, Dr. W. Allen Daley, Dr. G. W. N. Joseph, Dr. E. W. Rees Jones, Dr. R. Sydney Marsden, Dr. A. B. McMaster, Dr. Stewart Stalker, and Mr. John J. Weaver. The chair will be taken at 7.30 P.M. by Colonel J. Lane Notter, R.A.M.C., treasurer of the institute.

Correspondence.

"Audi alteram partem."

MONKEYS AS RESERVOIRS FOR THE VIRUS OF YELLOW FEVER.

To the Editor of THE LANCET.

SIR,—Though one cannot deny the possibility brought forward by Dr. Andrew Balfour in THE LANCET of April 25th that wild monkeys may act in certain places as reservoirs for the virus of yellow fever, yet anyone especially knowing the West Indies must at once see that this means is uncommon, if in fact it ever occurs at all. Recently numerous theories, chiefly made by people who have never seen yellow fever or studied the disease in its endemic areas, have been brought forward suggesting that animals may act as intermediate hosts or carriers of the virus. Agramonte and others have criticised this idea rightly, and have shown that as regards Cuba there is nothing to support such a view.

The West Indian Islands are, as a matter of fact, a very good place to study such a question, and during a visit paid to these parts in 1901 I had the good fortune to go through a yellow fever epidemic in St. Lucia, and also made observations upon the subject in the other islands as well. From these it is almost certain that the question of an animal host does not exist. If it did, then the disease would always be existent in those parts, and amongst the constant supply of non-immunes visiting these islands cases of definite yellow fever would always be occurring. Now such is not the case; once the disease is stamped out of the human population the island remains free until some chance importation of a case or of an infected mosquito brings back the virus. Cuba is a case in point; St. Lucia, where I studied the disease, was also so; and Barbados and the other islands also furnish similar examples. Epidemiological researches, then, carried out in suitable areas such as these are against an animal host, and still more strongly so are they against monkeys of any sort, especially red howlers. In most of the West Indian Islands such monkeys do not exist, and one must further remember that the disease occurs, even in places where there are monkeys, practically always in towns where such animals are conspicuous by their absence. The case of the town of Maracaibo, mentioned by Dr. Balfour, is only another example of this well-known fact.

It is right in passing to mention here that there are some monkeys in Barbados, but these live in a semi-preserved condition in a wood miles away from Bridgetown, the chief seaport, and are, I believe, descendants from West African monkeys brought in the old days by the slaves. They are not red howling monkeys, a species inhabiting the forests of Brazil, British Guiana, &c. Further, against the latter monkey being a carrier of the disease is the fact that it abounds, as I have just said, in the woods and forests of British Guiana, where, so far as I know, cases of yellow fever are not met with amongst the non-immunes who traverse those areas. Whilst travelling there in 1901 and investigating the filariasis which is found amongst the aboriginal Indians I had ample proofs of observing the diseases of the country and I

never met with yellow fever myself or heard of anyone else having seen it there. When yellow fever has been met with in British Guiana it has occurred in Georgetown, the chief seaport, or in the other towns of the coast line.

Referring to Dr. Balfour's paper again, I cannot say that the question of importation from the mainland is negatived in the recent small outbreak of yellow fever at Brighton, near the pitch lake in the south-west of Trinidad, nor can I agree with the remarks attributed to Mr. George—namely, "There is not the slightest evidence that the disease was conveyed here from outside sources." Dr. Balfour expressly states that Case 1, an American, had only been five days in Trinidad, and he had arrived there from the *Venezuelan mainland five days before being struck down*. It is perfectly clear to my mind, therefore, that he either acquired the disease on the Venezuelan mainland or on his transit from there to Trinidad. Case 2, who was taken ill almost at the same time as Case 1, is not perhaps so easy to explain as he had not been out of Trinidad for one year and seven months.

There is no doubt that sporadic cases, of what appears at least to be yellow fever, have cropped up from time to time in endemic yellow fever areas. That all of these have been genuine cases one cannot say definitely, because in many instances no necropsies have been performed nor any careful examinations made. In the light of recent research and improved diagnosis it will be interesting to see if such cases still occur.

The finding of bodies, similar to those described by Scott Macfie and Johnston in guinea-pigs and dogs, in monkeys' blood would be interesting, but would mean nothing. It has yet to be proved that these bodies are parasites, and, secondly, even if they are that they have anything to do with the cause of yellow fever. Recently looking at guinea-pigs' blood with Dr. C. M. Wenyon here in England we have seen bodies very similar to those described by the two observers just mentioned. Before their results can be accepted, therefore, confirmation must be forthcoming. I do not propose to enter into the controversy of Seidelin's bodies here at this moment. Agramonte, Schilling, Guiteras, and others, all very competent observers, have already done so, and their opinion is certainly against them.—I am, Sir, yours faithfully,

GEORGE C. LOW, M.A., M.D.,
Lecturer, London School of Tropical Medicine.

Bentinck-street, W., May 1st, 1914.

THE INFECTIVITY OF TUBERCULOSIS.

To the Editor of THE LANCET.

SIR,—In the annotation in your issue of May 2nd on certain evidence presented in regard to the methods of spread of tuberculosis, you state that "phthisiophobia is to be strongly deprecated," and such an expression of opinion from so weighty a journal as THE LANCET is of high value at the present time.

But I would ask to be allowed to draw the attention of your readers to the valueless nature of the evidence on which the conclusions are drawn by Dr. Lampson, to the effect that "the spread of tuberculosis in families having open cases of tuberculosis is greater than is generally believed." The spread of infection is considered in families, or those living in the house with them. Of such persons, the greater number would probably be members of the same family. The researches of Pearson and Goring have suggested that the heredity figure for phthisis is definite and fairly high. Hence full correction must be made for this factor before it is fair to begin to estimate the possible effects of infection. So far as stated, no such correction is made, and hence the deductions drawn are bound to be misleading. So far the most definite evidence on the point is the results of the various inquiries which have been made into the spread of infection among non-related persons in sanatoriums, and such inquiries have shown that "adults are very little endangered by close contact with open tuberculosis."

Apologising for troubling you with the matter,
I am, Sir, yours faithfully,

Colwall, Malvern, May 2nd, 1914. MARY H. WILLIAMS.

To the Editor of THE LANCET.

SIR,—In your annotation in THE LANCET of May 2nd you give an account of the view of Dr. Baldwin, of Saranac Lake, that the risk of infection of adults from cases of open pulmonary tuberculosis is small, and of the observations of Dr. Lampson, of Minneapolis, who found that an excessively high proportion of other members of the family reacted to tuberculin if one member of the family suffered from open pulmonary tuberculosis.

I am led to ask, Might not Dr. Baldwin reply that this excess might be due to abnormal susceptibility of these families to tuberculosis infection generally, of which the occurrence of a case of open pulmonary tuberculosis was indication, and not necessarily to infection derived from this case? I confess I am interested in the question from the point of view of the evidence upon which we must rely in this matter. I am, Sir, yours faithfully,

May 2nd, 1914. STUDENT.

THE FATALITY OF MEASLES.

To the Editor of THE LANCET.

SIR,—Anything connected with measles is important to the clinician and health officer, for measles and whooping-cough are the two most deadly and destructive diseases which menace the life and after well-being of the young child. I fear them more than either diphtheria or scarlet fever, of which the general public have such a dread, just as they regard measles and whooping-cough so light-heartedly. I wish both latter diseases were notifiable, for I am sure this would lead to a saving of young lives, but authorities are penny wise and pound foolish.

In three recent epidemics I have complete notes of 200 cases, of which 75 per cent. were in children of 5 or under, and a like percentage of the cases belonged to the artisan class. The deaths were six, equal to 3 per cent. All died of broncho-pneumonia, and one was aged 2 and the other five were 18 months or under. Of the 200 only two suffered from middle-ear disease, or 1 per cent., and one of the cases dried up completely at the end of 10 days and without impairment of hearing. Four of the 200 cases, aged respectively 6, 3, 2, and 1½ years, had "running ears" before, and they are not included. The low percentage of middle-ear disease seems to me worthy of special note, and I believe this happy result as well as the low death-rate is due to our better management of cases of measles during the last 20 years.

My own plan is to allow nothing but cold water, aerated water, lemonade, or weak tea for the first

48 hours after the rash appears. This helps to keep the mouth, pharynx, and naso-pharynx sweet and clean, and as no solid food is given putrefaction is largely prevented, and so there is less danger of mischief spreading along the Eustachian tube. I insist on the children sleeping between sheets and that the patients be sponged down all over twice a day at least, and that they be kept cool and not have their beds right up against a roaring fire, as was so common a practice in former days. I think a fire in the bedroom is useful, for it sometimes relieves a troublesome cough, but I insist on open windows but avoidance of draughts. I ask the mother or nurse to flush the room thoroughly with fresh air twice a day at least. I tell them that the irritating cough is not due to "cold," but is the result of the poison of the measles; that it will disappear as the poison is got rid of, and that the best channels of elimination are the skin and the kidneys. This note of explanation generally sets their minds at rest as to fresh air. I tell the attendants to keep the mouth clean and to attend to any discharge from the eyes and nose by washing with water that has been boiled and allowed to become lukewarm, and I point out the advantage of using small pieces of absorbent cotton wool or clean rag, which should be used only once and then burnt. I prescribe a mixture of ipecacuanha wine and solution of ammonium acetate and syrup, which is useful and comforting, and if there is great restlessness or if the cough is very troublesome I add thereto potassium bromide and morphine hydrochloride in suitable doses.

I am, Sir, yours faithfully,

Leeds, May 4th, 1914. J. GORDON SHARP, M.D. Edin.

THE PAYMENT OF FEMALE MEDICAL OFFICERS.

To the Editor of THE LANCET.

SIR,—You courteously granted me space for a letter on the above subject in your last issue in regard to the salaries of inspectors of the mentally deficient. It is gratifying to know that the second candidate has now sent in her resignation to the Board of Control.—I am, Sir, yours faithfully,

JANE H. WALKER,
President of the Registered Medical Women's Association.

Harley-street, W., May 4th, 1914.

TRAUMATIC DISLOCATION OF THE HIP-JOINT.

To the Editor of THE LANCET.

SIR,—The two cases of this accident recently reported in THE LANCET (April 18th and May 2nd) remind me that on Nov. 20th, 1911, I had a similar case in a boy in his eighth year. I do not know his exact age, but in the dispensary ticket issued to me his age was set down as 7 years. When the accident happened he was sitting in a cart drawn by a donkey. In turning a corner one wheel went up on the bank and the cart was overturned on the boy. When I saw him a few hours later I found a typical dislocation of the head of the left femur on to the dorsum ilii, the attitude of the limb exactly resembling the conventional diagram in the books. I gave the boy chloroform, and got his father to make steady traction in the direction of the limb. Of course I had no skilled assistance. With a little manœuvring and manipulation reduction was readily brought about. No splint was applied. The legs were bandaged together. There was no other injury and the boy was able to walk in a week. In the case reported on April 18th the patient "was allowed to put weight on the limb on the twenty-eighth day." That seems to have been pathetically timid. I am, Sir, yours faithfully,

J. F. KEENAN, M.B.

Ballinalee, Edgeworthstown, May 5th, 1914.

OVER-CONSCIENTIOUSNESS IN WOMEN.

To the Editor of THE LANCET.

SIR,—One very important feature in the work of women is brought to notice by the closing remarks in the third section of your Special Commissioner's article upon panel practice in Stepney and Enfield, published on April 25th. The quality of over-conscientiousness greatly mars the future prospects of many young women. Prosperity and promotion, instead of bringing greater ease, more comfort, and a healthier home life, often result in a complete collapse. Women are apt to allow their business to take too great a hold of them. They feel the anxieties, the difficulties, above all the responsibilities, too keenly. So long as they remain shop assistants or occupy some other subordinate position they continue to work and their strength and health hold out. But when they are promoted to a responsible position as manageress of a shop or a department, then they take to heart so keenly the various incidents, especially the unpleasant incidents, of their business that health gives way as a consequence of their hypersensitiveness or over-conscientiousness. Panel doctors are, I am sure, already in a position to testify to this very important and significant fact.

I was speaking recently to a lady who has been an ardent worker for the Band of Hope during now more than 20 years, and has, therefore, had time to follow up the careers of some of the girls who have been under her charge. This lady at once mentioned the case of one of her old pupils who used to earn her living very successfully and for several years as assistant at a fashionable London pastry-cook's shop. But the business was so prosperous that the owners opened another shop not far off and appointed the assistant in question as manageress. This should have meant better health and more wealth; it proved just the contrary. The strain, anxiety, and responsibility were too great. The new manageress soon became a hopeless invalid and had to give up work altogether.

Another of these Band of Hope girls worked for several years as waitress at one of the A.B.C. tea-rooms; but when finally she was appointed manageress she also broke down and has now been for two years incapable of doing any work whatsoever. Then a third case—in a small sweetstuff shop in South London one of the Band of Hope girls was engaged to assist the manageress for a wage of 10s. a week. So long as the work continued on this modest basis all went well. But one day the manageress elected to leave the business, and the owner of the shop thought the assistant was not only experienced enough to be appointed manageress in her turn but was young and energetic enough to attend to the whole business herself without anyone to help her. The anxiety and responsibility destroyed her health, and anæmia and nervous prostration incapacitated her for any work whatsoever.

The greater amount of medical care which, in response to the National Insurance Act, is now bestowed on women workers will help to throw

light on their special weaknesses and their special requirements.—I am, Sir, yours faithfully,

April 27th, 1914. PRACTICAL.

"THE MENACE OF CANCER" AND AMERICAN VITAL STATISTICS.

To the Editor of THE LANCET.

SIR,—In regard to the discussion on the trustworthiness of American vital statistics, Dr. Horst Oertel takes adequate care of himself in THE LANCET of April 18th against the depreciatory statement by Mr. Frederick Hoffman in THE LANCET of April 11th, that "the views of Oertel [as to the "greatest laxity and inaccuracy" which obtains in New York City] have not been accepted by qualified critics, although justified to a limited extent as regards initial diagnosis in hospital practice." Mr. Hoffman does not state what, in his judgment, constitutes a qualified critic, or whether he means that no qualified critics have accepted Oertel's views, or only that some have not. However, there has just come to hand information which seems to show that some critics undoubtedly support Dr. Oertel; whether these critics would be regarded by Mr. Hoffman as "qualified" he alone can say.

The information is contained in a cutting from the *Evening Post* of New York for March 30th, one of the most weighty of American newspapers, on account of its usual trustworthiness in regard to facts, the judicial character of its opinions, and its comparative restraint of expression. From this cutting it will be seen that the Hospitals Investigation Committee appointed by the Board of Estimate of New York City, after an exhaustive study of the number of necropsies performed in Bellevue and Allied Hospitals, and of mistakes made in diagnoses and in clinical examinations, recommend that the State law as to necropsies be changed so as to enable hospitals to perform a much larger percentage of necropsies than at present. Dr. Oertel's figures are quoted to establish the fact that of the 482 cases that came to necropsy, in 47·7 per cent., or close on one-half, the necropsy findings did not confirm the clinical diagnosis. If this percentage can be extended to the total of 3170 deaths, which according to Dr. Oertel's figures took place in one year in Bellevue Hospital, it would indicate 1521 deaths from conditions unknown or incorrectly diagnosed. The report further points out that at Bellevue necropsies are performed on only about 10 per cent. of those dying in hospital, as against 84 per cent. at University College Hospital, London, 99·9 per cent. at the Allgemeines Krankenhaus, Vienna, and 90 per cent. at most of the German hospitals. Every opportunity for post-mortem examination is afforded by Bellevue, which incorporates in its pathological buildings a morgue capable of accommodating 225 bodies, four necropsy rooms, and undertakers' rooms, but it is exceedingly difficult to secure permission for necropsies from relatives and friends, while in the case of unclaimed bodies the existing law, as interpreted by the late Commissioner of Charities, forbade necropsies thereon, and ordered them to be distributed intact among the medical colleges. The new law now proposed by the committee recommends that accredited hospitals shall be allowed to perform necropsies in cases where no objection is made within 48 hours by the next of kin. It seems obvious from the foregoing that there are certainly some presumably qualified critics who not only have accepted Dr. Oertel's views, but even propose to found legislation upon them. An interesting confirmatory case appears in the *Weekly Bulletin of Department of Health, City of New York*, for April 11th, which shows how unsafe are arguments for or against any given theory or principle which are based on clinical diagnosis alone. (And this is the point of the contention, for the medical profession in America has no special monopoly of such errors.) A member of the National Guard died from typhoid fever (so it was certified) on March 30th, 1914, in spite of the fact that he had been inoculated with antityphoid vaccine in January. Indeed, it was alleged that the inoculation not only had failed to prevent the disease, but had actually given rise to the infection. Naturally great commotion was caused, so that a necropsy by the coroner's physicians was held, when it was conclusively shown that there was no evidence of typhoid fever, but that the patient had died from malignant endocarditis and general sepsis.

I am, Sir, yours faithfully,

April 30th, 1914. ANGLO-AMERICAN.

THE NATIONAL INSURANCE ACT.

THE NATIONAL INSURANCE ACT AND THE BUDGET.

THE Budget statement of the Chancellor of the Exchequer contained indications of the directions in which he was prepared to extend financial support to the working of the National Insurance Act. The working of the Act having revealed, as all our readers know, an amount of disease among women which was unexpected, the Government will make a substantial grant to societies whose resources have been depleted as a result, the danger of malingering being guarded against. It is proposed to establish a system of medical referees "who will not merely be a check on malingering but will be a class of doctor whom the societies can call in to decide whether a case is doubtful or not, and who will be consultants." Such are Mr. Lloyd George's words, and it is clear that the officers whom he has in his mind will have very delicate duties to perform, and that the opportunities for friction will be numerous. It is proposed to establish clinics at convenient centres for the assistance of the practitioners on the panels in difficult cases where coöperation is useful, and also to organise a system of health lectures. A certain amount of encouragement is also promised to deposit contributors, whose numbers appear to be falling.

THE GLAMORGAN INSURANCE COMMITTEE AND A QUESTION OF POWERS.

At a recent meeting of the Glamorgan Insurance Committee an important question was raised by a letter from Dr. Marcus S. Paterson, the medical director of the Welsh Memorial, who had written to say that bacilli of tuberculosis had been found in the sputum of a certain man who was living in a house with young children, the local medical practitioner reporting that the conditions of the house were not suitable for the treatment of the disease. The man, however, continued to live in the house and apparently refused to leave it. The chairman of the committee expressed the view that the Insurance Act was defective in providing no machinery for enabling any compulsory steps in such matters, and it was

suggested that it was for the Approved Society to take steps. The difficulty and hardship of compulsorily separating a parent from his children was also referred to, and the matter was eventually left to the Sanatorium Benefit Subcommittee to deal with. At the same meeting discussion took place with regard to the prevalence of malingering, and the appointment of medical referees to deal with it was advocated. The question was referred to the Medical Benefit Subcommittee for its consideration.

PANEL DOCTORS WITH SMALL LISTS.

A meeting of panel doctors with small lists will be held at 3 P.M. to-day, Saturday, May 9th, at the Eustace Miles Restaurant, Chandos-street, Charing Cross, W.C., to hear the report of the committee formed by them on March 17th last. A statement will also be made concerning the interview of the committee with the Panel Service Subcommittee. It is hoped that all directly interested will endeavour to be present.

NATIONAL HEALTH INSURANCE AND THE IRISH CORPORATIONS.

The Royal College of Physicians of Ireland and the Apothecaries' Hall of Ireland have recorded their regret that in Section 44 (2) of the National Health Insurance (Medical Benefit) Regulations, 1913, and the Memorandum issued in connexion therewith, provision is made whereby insured persons who make their own arrangements for medical benefit under Section 15 (3) of the National Insurance Act may obtain treatment from unqualified persons. The College and the Hall add their regret that under an Act professing to promote the health of the nation unqualified practice should be possible. A similar resolution by the Royal College of Surgeons in Ireland was published last week.

COÖRDINATION OF TUBERCULOSIS TREATMENT.

The London Insurance Committee has adopted a number of rules designed to meet the circumstance that in a large number of cases the treatment provided at tuberculosis dispensaries, for which payment is claimed by the dispensary authorities, is such as could be given by practitioners on the panel to whom payment has already been made. The difficulty is that a large number of insured persons have been in the habit of attending dispensaries without a recommendation from the panel practitioner or the Insurance Committee, and frequently without the knowledge of the practitioner. The Insurance Committee has now decided to make it a condition of grants to dispensaries that insured persons treated there must have been referred by the panel practitioner or the Insurance Committee. Practitioners with whom insured persons contract out will act in this matter through the Insurance Committee. The committee has endorsed the view of the Panel Committee that the duties of the practitioner in respect of domiciliary treatment shall be those included in the Local Government Board Order of July, 1912, that the services of the dispensary shall be primarily of a consultative character, and given in coöperation with the practitioner. They shall consist of the more elaborate methods of diagnosis and such treatment (if any) as may be agreed upon between the practitioner and the consulting officer of the dispensary. The committee will require dispensary authorities to make definite arrangements for linking up the panel to the dispensary service and to consider as to giving panel practitioners representation upon dispensary committees. In order to arrive at a basis of grants to dispensaries the proportion of cases referred by practitioners is to be recorded, and the Insurance Committee will institute inquiries in any districts where the proportion is found to be above the average.

THE POSITION OF PANEL CHEMISTS AT ABERDEEN.

At a largely attended meeting of Aberdeen chemists the following resolution was passed for transference to the Local Health Committee:—

That this meeting, having had under consideration the payment of the drug accounts under the National Health Insurance in the Aberdeen burgh area, desire to enter an emphatic protest regarding the inadequacy of the sums paid for the last two quarters, and particularly for the quarter just closed, they only having received 52½ per cent. of the total accounts due; and they also desire to point out to the Insurance Committee that chemists are in no way responsible for the quantity of medicines used, their duty under their contract with the committee being entirely confined to the dispensing of medicines ordered by the medical practitioners on the panel in accordance with the tariff prices agreed upon, and this they claim to have faithfully done. They feel they need scarcely point out to the committee the utter impossibility of such a state of matters being allowed to continue without very serious consequences following. They therefore request the committee to get an assurance from the Commissioners before June 1st that the arrears will be paid within a reasonable time, otherwise they consider the panel system in the Aberdeen burgh area will be seriously imperilled.

It was also agreed that it be remitted to the Pharmaceutical Statutory Committee to send a memorial to the Scottish Insurance Commissioners on the grounds of the following motion:—

This meeting of panel chemists in the Aberdeen burgh area, in view of the extreme gravity of the position in which they are placed through the inadequacy of payments, hereby require the Statutory Committee to forward to the Scottish Commissioners a memorial setting forth a full statement of the case, assuring them of the impossibility of continuing on the panel under the existing conditions, and request an assurance that in future no *pro rata* arrangement of payment will exist, and not more than 10 per cent. deductions made previous to the checking of the accounts, and that only until the accounts are checked and adjusted; and also protesting against the injustice of paying bonuses in some areas while in others the ordinary accounts are not met.

SCOTTISH RECHABITES AND INSURANCE.

At the annual meeting of the Scottish Provincial Council of the Independent Order of Rechabites prominence was given in a speech by Brother Lunan to the question of excessive sickness and to the alleged negligence or want of independence on the part of medical men as being responsible for the drain upon the funds of the societies. The speaker attributed the evil to the fact that medical men were no longer under the control of the societies and were afraid to tell their insured patients that they were capable of work owing to the possibility of their transferring themselves elsewhere. He said that "if the doctors wished to avoid the establishment of a State Medical Service they would best consult their own interests if they acted what he would call honestly." This observation was received with applause. Brother Lunan had already expressed

the belief that the majority of the medical profession was acting honestly in the matter of giving certificates, and we may record here the opinion that the honest majority is a great deal larger than he supposes. It may also be suggested that the medical profession is not likely to give up the freedom from the control of Friendly Societies which it now enjoys, and that whatever reasons there may be for advocating the establishment of a State Service, there is nothing to show that its members would be less independent of the societies than they are now. The giving of certificates not demanded by the patient's condition is alleged to be due to a desire to retain insured patients, but it has not yet been proved either that such undeserved certificates are given in large numbers, or that, if so given, they are due to the cause mentioned. Consequently, under a State Service societies might well find themselves no better off than they are now.

Medical News.

UNIVERSITY OF CAMBRIDGE.—At the recent Examination in Sanitary Science the following candidates were successful:—

Charles Henry Arthur Alderton, *John Horatio Baldwin, Howell Wood Barnes, *Edward Hamilton Black, David Sands Brough, †Muriel Constance Bywaters, James Cairns, Milton Carrasco, John Marcus Hobson Conway (Captain R.A.M.C.), Lucy Davis Cripps, George da Silva, †Henry Leatham Grabham, William Cooper Gunn, James Stewart Hall, Hiranath Dhondnath Khote, William Maxwell McKie, Hugh McLean, *Malcolm Manson, Felix Oswald Newton Mell (Major I.M.S.), John Morison (Captain I.M.S.), John Carmel Noronha, John Harold Peck, Arthur Errington Rayner, William Bramwell Reid, Eric Hemingway Shaw, James Johnson Sinclair, *Edwin Charles Allan Smith, Norman Walmsley Steinberg, Alfred Maurice Thomson, and Edward Archibald Walker.

* Distinguished in the practical applications of sanitary science and pathology. † Distinguished in the principles of hygiene.

The following medical degrees have been conferred:—

M.D.—L. B. C. Trotter, Clare.
M.B., B.C.—C. R. Taylor, Caius.
M.B.—J. P. H. Davies, Jesus.

ROYAL FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW AND ROYAL COLLEGES OF PHYSICIANS AND SURGEONS OF EDINBURGH.—The recent examinations of the Royal College of Physicians of Edinburgh Royal College of Surgeons of Edinburgh, and Royal Faculty of Physicians and Surgeons of Glasgow, held in Glasgow, were concluded on April 25th. The following candidates passed the First Professional Examination:—

Reginald Douglas Howat, East Kilbride; Cuthbert Gaulter Macgee, Fleetwood; and Allan Paul McLeod, Barrhead.

The following candidates passed the Second Professional Examination:—

William Brown, Larkhall; John Archibald Steele Campbell, Dairy, Ayrshire; William O'Gorman Donoghue, Glasgow; John Alfred Alexander Duncan, Middlesbrough; Peter Fraser Fairley, Hamilton; Alfred David Gorman, Methven; George Alexander Grandsoult, British Guiana; Percy Hayes, Cork; Harold Cranwell Aloysius Haynes, Victoria, Australia; John William Irvine, Shetland; Edward Glyn Jones, Liverpool; Mary Gray Jones, Motherwell; Alexander Morrison, Glasgow; John Joseph Mulvey, Airdrie; and John Alexander Murray, Glasgow.

The following candidates passed the Third Professional Examination:—

Oswald Brunlees, Roehampton; John Crawford (with distinction), Paisley; David Andrew Imrie, Glasgow; Percy Milnes, Brighouse; George London Neil, Lesmahagow; John Mellon Smeaton, Glasgow; Frederick William Thompson, Garlieston; and William John Mitchell White, Glasgow.

The following candidates passed the Final Examination and were admitted L.R.C.P.E., L.R.C.S.E., and L.R.F.P.S.G.:—

William MacLeod, Glasgow; Edward Dias, Goa; Jerome Soares, India; John Corcoran, Cork; Gopal Das Madhok, India; Violet Millicent Tracey, Glasgow; William James Valentine Curtain, Melbourne; Muljibhai Kuberdas Dalal, Bombay; Fred Miller Murray, Glasgow; Maud Bennett, London; and Léon Gallemar, Mauritius.

CHELSEA TUBERCULIN DISPENSARY.—Owing to the death of the Duke of Argyll the ceremony of opening this tuberculin dispensary is postponed from to-day (Saturday, May 9th) to Friday, June 5th, at noon, when H.R.H. Princess Christian of Schleswig-Holstein has again consented to attend and perform the ceremony. The dispensary will be open for inspection on Saturday, June 6th, from 2 to 6 P.M.; tea at 4.30.

UNIVERSITY COLLEGE, LONDON.—The Page-May memorial lectures for the current session will be delivered by Dr. Keith Lucas, F.R.S., Trinity College, Cambridge, on the Conduction of the Nervous Impulse. The course will be held at University College on Fridays at 5 P.M., beginning on May 15th. The lectures are open to all internal students of the University of London, and to such other persons as are specially admitted. Applications should be addressed to the secretary, University College, Gower-street, London, W.C.

CENTRAL MIDWIVES BOARD.—A special meeting of the Central Midwives Board was held at Caxton House, Westminster, on April 29th, Sir Francis H. Champneys being in the chair. A number of midwives were struck off the roll, the following charges amongst others having been brought forward: The child suffering from inflammation of and discharge from the eyes the midwife did not explain that the case was one in which the attendance of a registered medical practitioner was required, nor did she hand to the husband or the nearest relative or friend present the form of sending for medical help, properly filled up and signed by her, in order that this might be immediately forwarded to the medical practitioner, as required by Rule E 20 (5); not keeping the register of cases as required by Rule E 23; disregarding the wish of the patient's relatives for medical assistance; neglect to take the pulse or temperature of the patient at visits; douching the patient with an unsuitable appliance; neglect to notify the local supervising authority when medical aid has been sought, as required by Rule E 21 (1); not keeping the bag of appliances in a cleanly condition; being unable to use a clinical thermometer with accuracy, and consequently unable to comply with Rule E 13. Medical aid having been sought for the patient on the day of the confinement the midwife neglected for some days to notify the local supervising authority thereof, as required by Rule E 21 (1); and not keeping the register of cases as required by Rule E 23.—A meeting was held at Caxton House on April 30th, Sir Francis Champneys being in the chair. Letters were considered from the Local Government Board with reference to the chairman's letter of Feb. 20th criticising the provisions of the Ophthalmia Neonatorum Order, 1914, and from the medical officer of health of Manchester on the same subject. The Board directed: (*a*) that the Local Government Board be thanked for their letter; (*b*) that the medical officer of health of Manchester be thanked for a copy of his circular on ophthalmia neonatorum. A letter was considered from the London County Council asking whether the Board is prepared to issue instructions with regard to the most effective germicide to be used by midwives for the treatment of the eyes of infants during the first few days after birth. The Board decided that the reply be that the principle of the Board has been to refrain from ordering any special drug in such cases as are therein referred to inasmuch as opinions differ, and it would, in their view, be unwise to frame a rule ordering the use of any particular germicide inasmuch as the breach of such a rule could not rationally be punished if the delinquent were able to quote recognised authority for the use of the particular germicide—other than that authorised by the Board—used by her. A letter was considered from the honorary secretary of the Southampton Midwives Association asking whether Credé's method may be used by a midwife as a preventative in cases of ophthalmia neonatorum. The Board directed that the reply be: (*a*) that the Board has purposely refrained from issuing orders on points of treatment on which recognised authorities differ; and (*b*) that the Board has never ordered the use of Credé's method as a prophylactic. A letter was considered from the medical officer of health of Carlisle inquiring as to what is to be regarded as a stillbirth for the purpose of the Notification of Births Act 1907. The Board decided that the reply be that the Board points out that it has no specific

functions with regard to carrying out the Notification of Births Act, 1907. That as regards the duties of a midwife in notifying stillbirths to the local supervising authority the definition of a stillbirth is given in Rules E. 21 (1) (c) note as follows: "A child is deemed to be stillborn when after being completely born it has not breathed or shown any sign of life." A letter was considered from the Infantile Health Central Committee forwarding a copy of a resolution passed at a meeting held on April 28th suggesting that the Board should include the subject of the hygiene of infant clothing among those upon which candidates for the Central Midwives Board's certificate are liable to be examined. The Board directed that the Infantile Health Central Committee be informed that candidates for the certificate of the Central Midwives Board are already liable to be examined on the subject specified (Rules C.4 (n)).

CENTENARY OF THE ROYAL HOSPITAL FOR DISEASES OF THE CHEST.—The medical staff of the Royal Hospital for Diseases of the Chest are celebrating the 100th anniversary of the hospital by a commemoration dinner, to be held at the Savoy Hotel to-day (Friday, May 8th). This hospital makes the honourable claim to be the first established in Europe for the special treatment of thoracic disease, including pulmonary tuberculosis.

UNIVERSITY OF LEEDS: FACULTY OF MEDICINE.—The following special lectures on medical subjects will be given in the Great Hall of the University at 4 P.M. on Wednesdays:—Rheumatoid Arthritis and Allied Conditions, Mr. T. S. P. Strangeways, director of the Cambridge Research Hospital, May 13th; Lead Poisoning from the Industrial and Medical Point of View, Sir Thomas Oliver, professor of medicine in the University of Durham, May 20th; Intestinal Stasis, Sir W. Arbuthnot Lane, senior surgeon, Guy's Hospital, May 27th. Admission will be free to members of the medical profession on presentation of their visiting cards.

COMMITTEE ON "SPIRITUAL HEALING."—As the result of a conference of representatives of the clerical and medical professions held in the Chapter House of St. Paul's Cathedral in October, 1910, a standing committee consisting of 9 clergymen and 11 medical men, with Bishop Ryle, Dean of Westminster, as chairman, was appointed to investigate "spiritual," "faith," and "mental" healing, to safeguard against their dangers, and to promote coöperation between the two professions. The medical members were Sir Dyce Duckworth (vice-chairman), Dr. Stanley Bousfield, Dr. Charles Buttar, Mr. W. McAdam Eccles, Dr. F. de Haviland Hall, Dr. Theo. B. Hyslop, Dr. H. G. Gordon Mackenzie, Dr. J. A. Ormerod, Sir R. Douglas Powell, Dr. Howard H. Tooth, and Sir T. Clifford Allbutt. According to its report just published by Messrs. Macmillan the committee held 19 sittings and investigated a considerable number of cases of alleged healing, in the greater number of which, however, no medical evidence was obtainable. Attention was particularly directed to the investigation of cases of ordinarily incurable diseases, but in no such disease as, for instance, cancer, Raynaud's disease, or disseminated sclerosis did it appear that the course of the actual disease had been in any way retarded. A digest of those cases in which it was possible to obtain medical evidence both before and after treatment is given in Appendix B, and in Appendix C is a summary of the evidence of some of the witnesses. The conclusions arrived at by the committee, all of whom sign the report, are that so far as they have a purely medical aspect the physical results of what is called "faith" or "spiritual" healing do not prove on investigation to be different from those of mental healing or healing by suggestion; they recognise that suggestion is more effectively exercised by some persons than by others; they consider that as in all treatment by suggestion spiritual healing can be expected to be permanently effective only in what are understood as functional disorders, and that alleged exceptions are too disputable to be taken into account; and they emphasise this point to warn those who resort to "healers" of the danger of postponing medical treatment. They consider spiritual ministration should be recognised equally with medical ministration for the sick. The committee propose to continue their investigations, and will be glad to have cases of spiritual healing brought to their notice that comply with the following conditions: (1) a diagnosis by a medical practitioner before treatment, with a short history of signs and symptoms; (2) an account of the treatment, with dates and details; (3) a medical examination, by the same doctor if possible, after treatment, with a detailed account of the changes that have taken place.

UNIVERSITY COLLEGE, READING.—A new gymnasium which has been presented to University College, Reading, by Dr. and Mrs. J. B. Hurry, has just been opened.

LITERARY INTELLIGENCE.—Mr. Henry Kimpton announces the publication of a new work on the "Eye, Nose, Throat, and Ear: A Manual for Students and Practitioners," by James Forrest, M.B., Ch.B. Edin.; also a new seventh edition of "Consumption, a Curable and Preventable Disease," by Lawrence F. Flick, M.D. Philadelphia.

LIVINGSTONE COLLEGE: APPOINTMENT OF A NEW PRINCIPAL.—The committee of Livingstone College have decided to appoint the vice-principal, Dr. Loftus E. Wigram, formerly honorary secretary of the Church Missionary Society, to succeed Dr. Charles F. Harford as principal of Livingstone College, when the latter resigns his post at the end of July.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Milk and Dairies (Scotland) Bill.

Mr. MCKINNON WOOD, the Secretary for Scotland, has introduced a Bill "to ensure the purity of milk-supplies and to regulate dairies in Scotland, and for other purposes connected therewith." It has been read a first time.

The Medical Profession and the Income-tax.

Some members of the medical profession will be affected by the new income-tax proposals put forward by Mr. LLOYD GEORGE in his Budget statement on Monday, May 4th. For earned incomes under £1000 the present rate of 9*d.* in the £ is continued. In the case of incomes from £1000 to £1500 the present rate of 9*d.* is increased to 10½*d.* Incomes from £1500 to £2000, which formerly paid at the rate of 9*d.*, will in the future pay at the rate of 1*s.* The present rate on incomes from £2000 to £2500 is 1*s.*, but it is to be raised to 1*s.* 2*d.* Incomes ranging from £2500 to £3000 are now taxed at 1*s.*, but the future rate will be 1*s.* 4*d.* Incomes over £3000, which now contribute at the rate of 1*s.* 2*d.* in the £, are to be taxed at 1*s.* 4*d.* In addition to these increases of the rate in the case of earned incomes, the tax on unearned incomes is to raised from 1*s.* 2*d.* to 1*s.* 4*d.* in the £. The super-tax limit is lowered from £5000 to £3000, and there again the principle of graduation will take effect.

The Budget and Public Health.

Mr. LLOYD GEORGE in the course of his Budget statement made reference to public health and national efficiency, and also to the necessity for Government assistance to National Insurance. Under this head he made important proposals as to medical referees and clinics. He said that there was no more important branch of the public service than that which dealt with the prevention and the cure of disease. Much of the disease and lack of vitality might be due to the faults and weaknesses of people, but there was a great margin which was due to other causes—causes which were entrusted to the supervision, care, and control of the local authorities. For instance, there were the unhealthy and overcrowded dwellings which were such a prolific source of depressed vitality in this country. There were the absence of sufficient provision for the cure of disease in its initial stages, the absence of any systematic instruction in the principles of health, and the lack of the supervision in the nurture and upbringing of children. He would like to say a word about the stamping out of tuberculosis, the most terrible plague that ever afflicted any country. Some municipalities had dealt with this problem with great public spirit. Notably that was so in the case of Liverpool and Birmingham, and some county councils in England, Scotland, and Wales had shown the same spirit. He wished he could say the same thing of the municipality that ought to lead the cities of the Empire for bettering the conditions of its working people—he meant London. For reasons which he could probe, but which he did not intend to dwell upon, the authority there had been dilatory, suspicious, obstructive, laggard in the attempt to stamp out tuberculosis. There was some excuse to be found in rates. He proposed that in future local authorities should be pressed to show greater activity and enterprise in grappling with all these evils that were sapping the national health and happiness. Parliament was on the eve of proposing great changes to

deal with the housing problem. The first thing was to put local authorities in a position to enable them to carry out these proposals without being crippled and handicapped by rates. The contribution which the Government proposed to make to the rates would be used as a means of pressing local authorities to deal with more spirit and boldness with such matters as housing, including the clearing of slums and a provision of better accommodation, the provision of a sufficient number of hospitals, and the grappling with greater energy with tuberculosis. The total grant for the United Kingdom would be £4,000,000 for the first full year. There were certain services which required such immediate action and stimulus that he proposed specific and separate grants with respect to them. They were in the region of coöperation between insurance and local government. The first was the campaign against tuberculosis. While the Insurance Act was passing through the House of Commons a provision was inserted extending the tuberculosis arrangements to dependents of insured persons. It was contemplated that the local authorities should bear half the deficiency and the Government should provide the other half. A good many local authorities had undertaken the work, and there was a considerable sum this year in the estimates for the Government half of that expenditure. Now that the public health grant was to be made, and a substantial grant, on the condition of efficient discharge of the duties of the localities in respect of public health, more money would be required. Where the local authorities were not ready to take up the work the grant would be made to the Insurance Committee, so that the dependents of insured persons should not suffer through the slackness of any local authority. There would be considerable grants for that purpose. There was another branch of the service which was also in that region between insurance and local government. The Insurance Act had helped to make it clear that any system of doctoring was hopelessly inefficient which was not supplemented by a good system of nursing. There were voluntary associations throughout the country doing admirable work, but they were inadequately financed. The local authorities of some districts were also doing this work. The Government proposed to provide a substantial annual sum to help the work of providing and training an adequate supply of nurses. There was another deficiency which had been exposed by the operation of the Insurance Act. There was no provision for the scientific diagnosis of disease. In Germany, in almost every town, and he thought also in France, there were pathological laboratories which were of enormous assistance to medical men in ascertaining the real character of a disease when they were in doubt upon the subject. There were a few boroughs in the United Kingdom where something had been done, even in London, but the Government proposed to make a grant for the purpose of aiding the local authorities to set up these laboratories throughout the United Kingdom. The total of these three services would be £750,000.

Mr. AUSTEN CHAMBERLAIN: Is that additional to the £4,000,000 for public health of which the right honourable gentleman spoke?

Mr. LLOYD GEORGE: Yes; these are specific services for which we are going to give special subsidies. The right honourable gentleman went on to discuss educational problems, including the feeding of necessitous school children. There were still 260,000 children who needed but received no relief at all, and many others who received inadequate relief. There was no provision for Saturday or holidays, and the children came back at the end of their holidays in a dazed, tired, and listless condition. Now the State proposed that henceforth, when local authorities undertook the work of feeding, the Exchequer would contribute one-half of the expenditure. Then there were further grants for health work among children in other directions. The Government were already finding the money for the medical inspection and treatment of children. Then they proposed there should be a grant for physical training, for open-air schools—he was told that about one-fifth or one-sixth of the children stood in urgent need of training of that kind—for dealing with tuberculosis in children, and there was an epidemic grant to help the education authorities to close the schools without loss in the case of an epidemic in the neighbourhood. There were special grants for schools for deformed children, for the feeble-minded and crippled, and it was also proposed to aid the schools for mothers—the maternity centres, which had sprung up in many parts of the country, and were doing admirable work.

More Financial Support for National Insurance.

In regard to the National Insurance Act, Mr. LLOYD GEORGE said: I come to National Insurance. Experience of the work of the National Insurance Act shows the direction in which financial support is needed. I made several statements on the point earlier in the session. It shows that in spite of the abnormal work of the first year the resources provided fully justified the actuarial estimate. I further stated that under no conditions would any subsidies be given to make up deficiencies due to mismanagement and malingering; but that there were cases where well-managed societies attracted an unusual proportion of bad lives, or were limited to classes subject to special sickness and disability, and above all the working of the Act revealed an appalling amount of sickness amongst married women, especially under certain conditions, a fact which was quite unknown before the Act came into operation. I promised that if deficiencies in these cases were due not to malingering and not to mismanagement, but to circumstances of a kind over which no society had any control and which demand the assistance of the Government and the support of the State, it would be the business of the Government to recommend to the House of Commons some means of dealing with them. That is what we propose to do. I do not think it would be desirable at this stage to go into the details. The whole of the burden will not fall upon the State. The societies also must come to the rescue. I do not think it would be desirable for me to give the general character of the proposals. I think it would be desirable, before they are finally settled that there should be further consultations with the societies. It is perfectly clear that the Government will have to make a substantial grant in aid of these very abnormal and, as far as some of them are concerned, distressing cases. We have to deal with the deposit contributors. We anticipated that there would be 900,000 deposit contributors, but as a matter of fact there are only 400,000. The rest have all joined societies, and out of the 400,000 there are very few who have not joined societies because they cannot join them. There are some who, out of choice, prefer to remain outside. There are others who probably believe that in a few years they will be out of insurance because they will be above the insurance line, and who therefore do not think it worth while to join societies. The number of those who become deposit contributors because they have no other option is small, and it is a dwindling number; but those are people who deserve a little encouragement and support from the State. We propose to do something for them, something for certain cases of arrears of unemployment. We propose also to establish a system of medical referees who will not merely be a check upon malingering but will be expert medical men, who can be called in for an opinion where there is a serious case of illness and the ordinary medical man on the panel is not quite sure and wants to get a second opinion. It is proposed to establish clinics in convenient centres to assist the panel doctors to coöperate in difficult cases. We propose to assist the organisation of a system of health lectures, such as exists in Germany, which has done a vast amount of good in spreading a knowledge of the principles of health among the insured population. The total of that for insurance will be £1,250,000 for the whole of the United Kingdom.

HOUSE OF LORDS.

THURSDAY, APRIL 30TH.

Midwives (Scotland) Bill.

The House went into Committee on the Midwives (Scotland) Bill.

Lord BALFOUR of BURLEIGH, who is in charge of the Bill, said that there were a large number of amendments to the Bill on the notice paper. They were all, however, of a drafting nature. He promised that he would move the recommittal of the Bill after the amendments were agreed to.

The amendments were inserted in the Bill without discussion.

The Bill was afterwards ordered to be recommitted.

HOUSE OF COMMONS.

THURSDAY, APRIL 30TH.

Superintendent of Statistics, General Register Office, Ireland.

Mr. KELLY asked the Chief Secretary to the Lord Lieutenant of Ireland whether the superintendent of statistics in the General Register Office was about to retire; and, if so, in view of the fact that this was a small office with a total staff of only about 30 established officers, would he revert to the practice of promoting one of these officers to the vacant superintendentship.—Mr. T. W. RUSSELL (on behalf of Mr. BIRRELL) replied: The Registrar-General informs me that the answer to the first part of the question is in the negative. The latter part does not therefore arise.

Mr. W. ABRAHAM asked the right honourable gentleman whether the position of superintendent of statistics in the General Register Office, Dublin, had always been filled by a permanent civil servant on vacancies occurring since the establishment of the office; whether there was at present any special reason why another general medical practitioner should be deemed to have special qualifications for discharging clerical or administrative duties in this office; whether the work of classifying causes of death and of segregating the various diseases which could be accepted as

causes of death had been very fully and efficiently dealt with by the present superintendent of statistics; in the event of further questions of this nature arising, would they be referred to Sir William Thompson, M.D., the Registrar-General; and would he resist any recommendation to appoint anyone who was not an established civil servant to the vacancy.—Mr. T. W. RUSSELL replied: This is practically the same question as the last, and the same answer applies.

Cases of Anthrax.

Mr. JOWETT asked the Home Secretary whether he was aware that on Wednesday, April 15th, a washbowl minder employed by Messrs. Campbell and Harrison, a branch of Woolcombers, Limited, of Bradford, contracted anthrax in the course of his employment and died of the said disease on the following Saturday, and that on the same day a washbowl feeder in the employment of Messrs. John Cure and Co., another branch of Woolcombers, Limited, contracted anthrax in the course of his employment, and he also died of the same disease; and whether he would say how many cases of anthrax had occurred among the employees of each of the two firms mentioned, respectively, during the period of years 1900 to 1913 inclusive, distinguishing between fatal and non-fatal cases.—Mr. MCKENNA answered: I have seen reports of the two cases mentioned, in both of which the disease was apparently contracted previously to and developed during the Easter holidays. The total figures for the two firms referred to for the period 1900 to 1913 are: For the former firm 18 fatal and 36 non-fatal cases; for the latter 6 fatal and 14 non-fatal cases. As my honourable friend is aware, an inquiry is now being conducted by a Departmental Committee into the dangers from anthrax in the Bradford woollen industries and the working of the existing regulations.

Coroners in England and Wales.

Mr. MCKENNA informed Mr. HIGHAM that there were in all 366 coroners in England and Wales, of whom 82 were paid by fees.

Food Inspection at the Port of London.

Answering Mr. HUNT, Mr. HERBERT SAMUEL (President of the Local Government Board) stated that including the medical officer of health and his assistants there were 19 officers engaged in the work of food inspection in the Port of London Sanitary District. During the year 1913 8,718,365 cwt. of meat (excluding poultry and game) were imported into London. The inspection of imported meat devolved upon officers of the Port Sanitary Authority, working in conjunction with the officers of customs. He had received no complaint as to the inadequacy in number of the inspectors. The responsibility for the inspection did not lie with the Local Government Board, but with the local authority.

The Use of the Geneva Cross.

Mr. LANE-FOX asked the Under Secretary of State for War why men of the National Reserve who had served in the Royal Army Medical Corps regulars or auxiliaries were not permitted to wear the Geneva Cross of the Royal Army Medical Corps on parade, provided they were properly registered under the new classification and were restricted to wearing it on parade; and would he consider the granting of this privilege to these men.—Mr. TENNANT wrote in reply: Under Article 23 of the Geneva Convention the emblem of the red cross on a white ground and the words "Red Cross" or "Geneva Cross" cannot be used except to protect or indicate the medical units and establishments and *personnel* and *matériel* protected by the Convention.

MONDAY, MAY 4TH.

A Resolution of the Royal College of Surgeons in Ireland.

Mr. NEWMAN asked the honourable Member for St. George's-in-the-East, as representing the Insurance Commissioners, whether he had received a resolution passed by the Royal College of Surgeons in Ireland on April 19th expressing regret that insured persons who make their own arrangements for medical benefit might obtain treatment from non-qualified persons, and deploring that recognition should be given and provision made for the payment of public money to persons who had no legal qualification to practise and concerning whose medical knowledge there existed no sort of guarantee; and, if so, whether he proposed to take any action in the matter.—Mr. WEDGWOOD BENN replied: My right honourable friend's attention has already been drawn to the resolution in question, which appears to be based on a misapprehension as to the scope of the Regulation alluded to. I would refer the honourable Member to the reply which I gave on March 6th.

Panel Practitioners and Lapsed Insured Persons.

Mr. DENNISS asked the honourable Member for St. George's-in-the-East what steps were taken in England, Wales, and Scotland, respectively, to secure that names of insured persons who had died, or ceased to be insured, or had moved from an area in which they were formerly insured, were taken off the list of the panel doctor whom they had selected or to whom they had been assigned, and whether the arrangements made for this purpose were working satisfactorily; whether there was any reason to believe that some doctors had been paid on account of insured persons in respect of whom they were not entitled to be paid; and what instructions, if any, had been given to Insurance Committees to prevent the possibility of a panel doctor being paid in respect of an insured person for whom he was not entitled to make a claim.—Mr. WEDGWOOD BENN answered: Arrangements were originally made for the notification by Approved Societies to Insurance Committees of the deaths and lapses from insurance and removal of their members. As regards removals, a new system has been instituted which enables their notification by societies to be dispensed with. As regards deaths and lapses, the procedure is being revised in connexion with the new system and as a result of the experience gained. Cases may have occurred in which, notwithstanding the advice of the Commissioners, advances had been made to practitioners out of proportion to the amount due to them, but any such overpayments would of course be adjusted on the final settlement.

Balance of Medical Fund.

Mr. DENNISS asked the honourable Member for St. George's-in-the-East when the Commissioners expected to be in a position to inform Insurance Committees in England, Scotland, and Wales, respectively, of the amount of the medical fund at their disposal, in order that they might be in a position to make a settlement with their doctors and chemists for the year ending on Jan. 12th last.—Mr. WEDGWOOD BENN said in reply: The necessary accounting operations are now in progress and will shortly be completed.

Domiciliary Treatment for Tuberculosis.

Mr. ASTOR asked the honourable Member for St. George's-in-the-East whether Insurance Committees had power to provide, and did in fact, when required, provide, to persons in receipt of domiciliary treatment for tuberculosis, the following among other articles of food, viz., milk, butter, eggs, bread, fish, and meat, and if this had been done in England, Scotland, Ireland, and Wales.—Mr. WEDGWOOD BENN wrote in reply: All Insurance Committees are empowered to provide, and do in fact provide, for persons in receipt of sanatorium benefit in the form of domiciliary treatment such accessories as form part of the treatment, and are prescribed as such on medical grounds, and milk, butter, eggs, fish, and meat have in particular instances been thus given; but Insurance Committees are not empowered to provide maintenance by way of general relief.

TUESDAY, MAY 5TH.

Uncertified Deaths.

Mr. HIGHAM asked the President of the Local Government Board whether his attention had been drawn to the fact that the Regulations in regard to uncertified deaths recently issued by the Registrar-General, with the approval of the Board, had not been issued in the manner provided for in Sections 44 and 48 of the Registration Act, 1874, and whether he proposed to withdraw the Regulations.—Mr. HERBERT SAMUEL replied: I am aware of the provisions contained in the enactments referred to. The requirements of Section 44 of the Act of 1874 refer to orders made in pursuance of that section. These were not such orders. The answer to the last part of the question is in the negative.

BOOKS, ETC., RECEIVED.

ARROWSMITH, J. W., LIMITED, Bristol and London.

Holidays and How to Use Them. By Charles D. Musgrove, M.D. Price 2*s.* 6*d.* net.

BALE (JOHN), SONS, AND DANIELSSON, LIMITED, London.

Renal Diagnosis in Medicine and Surgery: Being a Handbook of the Theory and Practice of Functional Testing of the Kidney. By Dr. Victor Blum, Tutor in Urology at the University of Vienna. English translation by Wilfred B. Christopherson. Price 7*s.* 6*d.* net.

Defensive Ferments of the Animal Organism. By Emil Abderhalden, Director of the Physiological Institute of the University at Halle. Third enlarged edition. English translation by J. O. Gavronsky, L.R.C.P., M.R.C.S., M.D. Halle, and W. F. Lanchester, M.A. Price 7*s.* 6*d.* net.

COX, HORACE, LIMITED, London. PAIN, F. T., Paris.

The "Queen" Newspaper Book of Travel. A Guide to Home and Foreign Resorts. 1914. Compiled by the Travel Editor (M. Hornsby, F.R.G.S.). (Eleventh year.) Price 2*s.* 6*d.*

FISCHER, GUSTAV, Jena.

Handbuch der Gesamten Therapie. In sieben Bänden. Herausgegeben von Prof. Dr. F. Penzoldt, Erlangen, und Prof. Dr. R. Stintzing, Jena. Fünfte Auflage. Lieferung 11, Bd. II., Seite

49-208. Price M.3.50. Lieferung 12, Bd. II., Seite 209-368. Price M.3.50.

Handbuch der Vergleichenden Physiologie. Herausgegeben von Hans Winterstein in Rostock. Einundvierzigste Lieferung. Bd. III. Physiologie des Energiewechsels. Physiologie des Formwechsels Zweite Hälfte Seite 947-1060, Titel und Inhalt. Price M.5.

Paul Ehrlich Eine Darstellung seines wissenschaftlichen Wirkens von H. Apolant et alii. Festschrift zum 60 Geburtstage des Forschers. Price M.16.

Die Individualität der Zelle, von Siegmund von Schumacher. Price M.0.60.

HEINEMANN, WILLIAM, London.

Local Anæsthesia. By Dr. Arthur Schlesinger, Berlin. Translated by F. S. Arnold, B.A., M.B., B.Ch. Oxon. Price 5s. net.

On Dreams. By Prof. Dr. Sigm. Freud. Only authorised English translation by M. D. Eder, from the second German edition. With an Introduction by W. Leslie Mackenzie, M.A., M.D., LL.D., Medical Member of the Local Government Board for Scotland. Price 3s. 6d. net.

HIRSCHWALD, AUGUST, Berlin.

Entstehung und Entwickelung der Laryngoskopie. Erinnerungen aus meiner ärztlichen Tätigkeit, 1858-1913. Von Prof. Dr. Emerich von Navratil. Price M.1.60.

Geländebehandlung herzkranker Kinder im Mittelgebirge. Klinische und experimentelle Untersuchungen an herzkranken Kindern bei einem Kuraufenthalte im Thüringer Wald. Von Dr. H. Roeder. Unter Mitarbeit von Dr. C. Bieling, Dr. W. Spinak, und E. Wienecke. Mit einer Einführung von Dr. Adolf Bickel. Price M.3.60.

KARGER, S., Berlin.

Ursachen und Wesen angeborener Diathesen. Eine experimentelle Studie von Stabarzt Dr. Hans Eckert, Berlin. Price M.3.50.

Die Störungen des Verdauungsapparates als Ursache und Folge anderer Erkrankungen. Von Dr. Hans Herz, Breslau. Zweite umgearbeitete und vermehrte Auflage. III. Teil: Die chronischen Infektionskrankheiten in ihren Beziehungen zum Verdauungsapparat. Price M.9.

Psychiatrische Vorträge für Aerzte, Erzieher und Eltern (Dritte Serie). Von Prof. Dr. G. Anton, Halle. Price M.2.40.

Die Gonorrhoe des Weibes für die praxis Dargestellt. Von Prof. Dr. F. Fromme, Berlin. Price M.2.

Zur Prognose und Aetiologie der Kinder-Hysterie. Von Dr. A. Tobias, Bremen. Mit einem Vorwort von Prof. Dr. E. Feer, Zurich. Price M.3.50.

Nervös Zwanzig Gespräche Zwischen Aerst und Patient. Von Dr. Ludwig Scholz, Bremen. Price M.4.

KIMPTON, HENRY, London.

Consumption: A Curable and Preventable Disease. What a Layman should Know. By Lawrence F. Flick, M.D., Founder of the Pennsylvania Society for the Prevention of Tuberculosis. Seventh edition.

LAURIE, T. WERNER, LIMITED, London.

Life in an Indian Outpost. By Major Gordon Casserly (Indian Army). Price 12s. 6d. net.

LEWIS, H. K., London.

King Edward VII. Sanatorium, Midhurst. Preliminary Report of the Treatment of Pulmonary Tuberculosis with Tuberculin. By Noel D. Bardswell, M.D. With a Prefatory Note by Professor Karl Pearson, F.R.S. Price 6s. net.

LIVINGSTONE, E. AND S., Edinburgh.

Students' Pocket Prescriber and Guide to Prescription Writing. By H. Aubrey Husband, M.B., C.M., B.Sc., F.R.C.S.E., M.R.C.S. Fourth edition, revised and enlarged. Price 1s. 6d. net.

OCTAVE DOIN ET FILS, Paris.

Les Maladies du Cœur et de l'Aorte et leur Traitement. Par le Dr. Arthur Leclercq. Price Fr.7.

POINAT, A., Boulevard Saint-Michael, Paris.

Considérations Biologiques sur Le Cancer par Félix le Dantec Chargé du cours Biologie générale a la Sorbonne. Price Fr.1.

SCIENTIFIC PRESS, THE, LIMITED, London.

Cheap Continental Holidays. By Grace Vallois. Price 1s. net.

SMITH, ELDER, AND CO., London.

Saint Bartholomew's Hospital Reports. Vol. XLIX. Price to subscribers, 6s.; to non-subscribers, 8s. 6d.

Pot-Pourri Mixed by Two. By Mrs. C. W. Earle and Miss Ethel Case. Price 7s. 6d. net.

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SOUTH AFRICAN INSTITUTE FOR MEDICAL RESEARCH, Johannesburg.

Specific Serological Reactions with Pneumococci from Different Sources. By F. S. Lister, M.R.C.S., L.R.C.P. Price 2s. 6d.

Memoir No. 1.: An Inquiry into the Etiology, Manifestations, and Prevention of Pneumonia amongst Natives on the Rand recruited from Tropical Areas. By G. D. Maynard, F.R.C.S. Eng. Price 5s.

STEINHEIL, G., Paris.

De la Néphropexie (Procédé d'Albarran-Marion). Par le Dr. Jules Luzoir.

La Stase Intestinale Chronique par Le Docteur B. Sorrel.

TEMPLE HOUSE, Temple-avenue, London, E.C.

General and Practical Optics. By Lionel Laurence. Second and revised edition. Price 10s. net.

THIEME, GEORG, Leipzig.

Aerztliche Kosmetik der Haut. Von Prof. Dr. Kromayer. Vorträge über praktische Therapie. Herausgegeben von Prof. Dr. J. Schwalbe, Berlin. V. Serie, Heft 8. Price M.1.

URBAN UND SCHWARZENBERG, Berlin und Wien.

Technik der Speziellen Klinischen Untersuchungsmethoden. Herausgegeben von Prof. Theodor Brugsch, Berlin; und Prof. Dr. Alfred Schittenhelm, Königsberg. I. Tiel. Price M.36.

Die Prognosenstellung bei der Lungentuberkulose mit eingehender Berücksichtigung der physikalischen und serologischen Befunde und der therapeutischen Prognostik. Bearbeiten von Priv.-Doz. Dr. D. O. Kuthy, Budapest, und Dr. A. Wolff-Eisner, Berlin. Price M.20.

Taschenbuch der Augenheilkunde für Aerzte und Studierende (Dritte Auflage). Von Dr. Curt Adam, Berlin. Price M.8.

VIGOT FRÈRES, Paris.

Le Traitement des Sténoses Algues du Larynx. Par le Dr. G. Zorraquin (Buenos Aires). Price Fr.2.

WILEY, JOHN, AND SONS, New York. CHAPMAN AND HALL, London.

Clean Water and How to Get it. By Allen Hazen, Member of the American Society of Civil Engineers. Second edition. Revised and enlarged. Price 6s. 6d. net.

WILSON, EFFINGHAM, 54, Threadneedle-street, London.

The Law and Practice of Bankruptcy. By G. L. Hardy, of the Inner Temple.

WRIGHT, JOHN, AND SONS, LIMITED, Bristol. SIMPKIN, MARSHALL, London, and Agents at New York, Toronto, Calcutta, Bombay, Melbourne, Sydney, Adelaide, Brisbane, and New Zealand.

The Medical Annual: A Year Book of Treatment and Practitioners' Index. 1914. Thirty-second year. Price 8s. 6d. net.

Appointments.

Successful applicants for vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

ALCOCK, ARNOLD, M.B., B.S. Lond., has been appointed Assistant Surgeon to the Gloucestershire Royal Infirmary.

DICKSON, R. H., F.R.C.S., L.R.C.P. Irel., has been appointed Honorary Ophthalmic Surgeon to the North Staffordshire Infirmary.

GREIG, J. I., M.B., Ch.B. Glasg., has been appointed Certifying Surgeon under the Factory and Workshop Acts for the Kirkcaldy District of the county of Fife.

FOLKER, H. H., M.R.C.S., L.R.C.P. Lond., has been appointed Honorary Consulting Ophthalmic Surgeon to the North Staffordshire Infirmary.

DUNLOP, J. K., M.B., Ch.B. Glasg., has been appointed Certifying Surgeon under the Factory and Workshop Acts for the Sanquhar District of the county of Dumfries.

KNIGHT, C. V., M.D. Lond., has been appointed Surgeon to the Gloucestershire Royal Infirmary.

MCMURRAY, S., M.B., B.Ch., B.A.O. Irel., F.R.C.S. Edin., has been appointed Honorary Assistant Ophthalmic Surgeon to the North Staffordshire Infirmary.

MILLER, A. H., M.D. Camb., M.R.C.P. Lond., has been appointed Joint Pathologist to the Salford Royal, Manchester Children's, and Northern Hospitals.

MOORE, R. FOSTER, B.C. Cantab., F.R.C.S. Eng., has been appointed Assistant Surgeon to the Royal London (Moorfields) Ophthalmic Hospital.

NORRIS, ARTHUR HERBERT, M.R.C.S., L.R.C.P. Lond., has been appointed Medical Inspector of Reformatory and Industrial Schools.

ROBINSON, W. B., M.D., B.Ch. Oxon., M.R.C.S., L.R.C.P. Lond., has been appointed Anæsthetist to the West London Hospital, Hammersmith, W.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BARNSLEY, BECKETT HOSPITAL AND DISPENSARY.—Second House Surgeon, unmarried. Salary £100 per annum, with apartments, board, and laundry.

BARROW-IN-FURNESS, NORTH LONSDALE HOSPITAL.—House Surgeon. Salary £120 per annum, with residence, board, and laundry.

BEDFORD COUNTY HOSPITAL.—Assistant House Surgeon. Salary £80 per annum, with board, lodging, and laundry.

BELFAST, ROYAL VICTORIA HOSPITAL.—Four Resident Medical Officers for six months.

BIRKENHEAD AND WIRRAL CHILDREN'S HOSPITAL, Woodchurch-road, Birkenhead.—House Surgeon. Salary £100 per annum, with board, residence, and laundry.

BIRMINGHAM CITY EDUCATION COMMITTEE.—Assistant School Medical Officer. Salary £300 per annum.

BIRMINGHAM GENERAL HOSPITAL.—Honorary Physician.

BIRMINGHAM AND MIDLAND HOMŒOPATHIC HOSPITAL.—Resident House Surgeon. Salary £100 per annum, with board, laundry, &c.

BIRMINGHAM, ROMSLEY HILL SANATORIUM FOR CONSUMPTIVES.—Locum for three weeks.

BIRMINGHAM UNION.—DUDLEY-ROAD INFIRMARY: Resident Assistant Medical Officer. Salary £150 per annum, with apartments, rations, laundry, and attendance.

BOLTON INFIRMARY AND DISPENSARY.—Third House Surgeon. Salary £90 per annum, with apartments, board, and attendance.

BRADFORD CHILDREN'S HOSPITAL.—House Surgeon. Salary £120 per annum, with board, residence, and laundry.

BRADFORD ROYAL INFIRMARY.—House Surgeon, unmarried. Salary £100 per annum, with board, residence, and washing.

BRIGHTON, ROYAL ALEXANDRA HOSPITAL FOR SICK CHILDREN, Dyke-road.—House Surgeon for six months. Salary at rate of £100 per annum, with board, lodging, and washing.

BRIGHTON, ROYAL SUSSEX COUNTY HOSPITAL.—Assistant House Surgeon, unmarried. Salary £80 per annum, with apartments, board, and laundry.

BRISTOL CITY ASYLUM.—Second Assistant Medical Officer, unmarried. Salary £200 per annum, with apartments, board, washing, and attendance.

BRISTOL ROYAL HOSPITAL FOR SICK CHILDREN AND WOMEN.—House Surgeon. Salary £100 per annum, with board, rooms, attendance, and laundry.

BRISTOL ROYAL INFIRMARY.—House Surgeon for Throat, Nose, and Ear Department. Salary at rate of £100 per annum, with board, lodging, and laundry.

BURNLEY, VICTORIA HOSPITAL.—Senior Resident Medical Officer. Also Second House Surgeon, each for six months. Salary at rate of £120 and £100 per annum respectively, with residence, board, and washing.

BURSLEM, HAYWOOD HOSPITAL.—Female Resident Medical Officer. Salary £100 per annum, with board, residence, and laundry.

BURY INFIRMARY.—Junior House Surgeon. Salary £100 per annum, with board, residence, and washing.

CAMBRIDGE, ADDENBROOKE'S HOSPITAL.—House Physician. Salary £100 per annum, with board, residence, and laundry.

CANCER HOSPITAL (FREE), Fulham-road, S.W.—Assistant Surgeon.

CARLISLE NON-PROVIDENT DISPENSARY.—Resident Medical Officer. Salary £200 per annum, with apartments.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL.—House Physician. Salary £90 per annum, with board, apartments, and laundry.

CHICHESTER, WEST SUSSEX COUNTY MENTAL HOSPITAL.—Junior Assistant Medical Officer. Salary £200 to £250 per annum, with apartments, board, laundry, and attendance.

COLCHESTER, ESSEX COUNTY HOSPITAL.—Two Honorary Assistant Surgeons.

DERBYSHIRE EDUCATION COMMITTEE.—Assistant School Medical Officer. Salary £300 per annum, with £100 per annum for travelling expenses.

DEVONPORT, ROYAL ALBERT HOSPITAL.—House Surgeon, unmarried. Salary £50 for first six months, £75 for second six months, and at rate of £150 per annum during second year. Also Assistant House Surgeon, unmarried. Salary at rate of £75 per annum, with board and laundry.

DUDLEY, GUEST HOSPITAL.—Assistant House Surgeon for six months. Salary £100 per annum, with residence, board, and washing.

DURHAM COUNTY HOSPITAL.—House Surgeon. Salary £120 per annum, with board and lodging.

ECCLES AND PATRICROFT HOSPITAL.—House Surgeon. Salary £70 per annum, with board, washing, and lodging.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark, S.E.—House Surgeon. Salary at rate of £75 per annum, with board, residence, and washing.

FAREHAM, HANTS COUNTY ASYLUM.—Third Assistant Medical Officer, unmarried. Salary £200 per annum, with apartments, board, washing, and attendance.

FEDERATED MALAY STATES GOVERNMENT CENTRAL LUNATIC ASYLUM.—Assistant Superintendent. Salary £400 per annum, with free quarters.

FLINTSHIRE EDUCATION COMMITTEE.—Assistant Medical Officer. Salary £250 per annum.

GLASGOW, SCOTTISH WESTERN ASYLUMS' RESEARCH INSTITUTE.—Pathologist as Director. Salary £400 per annum.

GLOUCESTER, GLOUCESTERSHIRE ROYAL INFIRMARY AND EYE INSTITUTION.—Assistant House Surgeon for six months. Salary at rate of £80 per annum, with board, residence, and washing.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway-road, N.—House Physician and House Surgeon for six months. Salary at rate of £40 per annum each, with board, lodging, and laundry.

HALIFAX ROYAL INFIRMARY.—Second House Surgeon and Third House Surgeon, unmarried. Salary £100 and £80 per annum respectively, with residence, board, and washing.

HEMEL HEMPSTEAD, WEST HERTS HOSPITAL.—Resident Medical Officer. Salary £120 per annum, with rooms, board, and washing.

HUDDERSFIELD ROYAL INFIRMARY.—Assistant House Surgeon. Salary £80 per annum, with board, residence, and washing.

KING'S LYNN, WEST NORFOLK AND KING'S LYNN HOSPITAL.—House Surgeon. Salary £120 per annum.

KIRKMABRECK PARISH, Creetown, Kirkcudbrightshire.—Medical Officer. Salary £40 per annum.

LEICESTER POOR-LAW INFIRMARY.—First Resident Assistant Medical Officer and Second Resident Assistant Medical Officer. Salary £200 and £150 per annum respectively, with rations, apartments, and washing.

LIVERPOOL CITY INFECTIOUS DISEASES HOSPITAL AND SANATORIUM FOR TUBERCULOSIS.—Assistant Resident Medical Officer, unmarried. Salary £150 per annum, with board, washing, and lodging.

LIVERPOOL, DAVID LEWIS NORTHERN HOSPITAL.—Two Honorary Assistant Surgeons.

LIVERPOOL EDUCATION COMMITTEE.—Two Assistant School Medical Officers. Salary at rate of £250 per annum.

LONDON HOSPITAL, Whitechapel, E.—Medical Registrar. Salary £100 per annum. Also Surgical Registrar.

MAIDSTONE, KENT COUNTY ASYLUM.—Fourth Assistant Medical Officer, unmarried. Salary £250 per annum, with quarters, board, attendance, washing, &c.

MANCHESTER, ST. MARY'S HOSPITALS FOR WOMEN AND CHILDREN.—Honorary Assistant Surgeon.

MANCHESTER, MONSALL FEVER HOSPITAL.—Fourth Medical Assistant. Salary £130 per annum, with board, lodging, and washing.

MANCHESTER NORTHERN HOSPITAL FOR WOMEN AND CHILDREN, Park-place, Cheetham Hill-road.—Senior and Junior House Surgeons.

MANCHESTER ROYAL INFIRMARY.—Surgical Registrar. Salary £75 per annum. Also Medical Officer for Out-patients and Accidents to Central Branch for six months. Salary at rate of £100 per annum, with board and residence.

METROPOLITAN ASYLUMS BOARD INFECTIOUS HOSPITAL.—Junior Assistant Medical Officers, unmarried. Salary £180 per annum, with board, lodging, and washing.

MIDDLESBOROUGH, NORTH ORMESBY HOSPITAL.—Assistant House Surgeon. Salary at rate of £100 per annum first six months and £110 per annum afterwards, with board, apartments, washing, and attendance.

MIDDLESEX HOSPITAL, W.—Resident Officer to Special Departments for Diseases of the Eye, Skin and Ear, Nose and Throat.

NEWARK-UPON-TRENT HOSPITAL.—Resident Medical Officer, unmarried. Salary £100 per annum, with board, lodging, and laundry.

NEWCASTLE-UPON-TYNE DISPENSARY.—Vacancies on Visiting Medical Staff. Salary £200 per annum.

NEW HOSPITAL FOR WOMEN, Euston-road.—Female House Physician, Two House Surgeons, and Obstetric Assistant, all for six months.

NEW ZEALAND, UNIVERSITY OF OTAGO.—Professor of Anatomy. Salary £300 per annum.

NORFOLK EDUCATION COMMITTEE.—Assistant Medical Officer. Salary £300 per annum.

NOTTINGHAM CITY EDUCATION COMMITTEE.—Senior Medical Inspector of School Children. Salary £400 per annum.

NOTTINGHAM GENERAL HOSPITAL.—Assistant House Physician. Salary £100 per annum, with board, residence, and laundry.

OLDHAM ROYAL INFIRMARY.—Senior House Surgeon. Salary £140 per annum, with residence, board, and laundry.

PADDINGTON GREEN CHILDREN'S HOSPITAL, London, W.—House Physician and House Surgeon for six months.

PORTSMOUTH WORKHOUSE INFIRMARY, WORKHOUSE, AND CHILDREN'S HOME.—Second Assistant Resident Medical Officer, unmarried. Salary £140 per annum, with apartments, rations, &c.

PRESTON, COUNTY ASYLUM, Whittingham, Lancs.—Junior Assistant Medical Officer, unmarried. Salary £250 per annum, with board, apartments, &c.

PRINCE OF WALES'S GENERAL HOSPITAL, Tottenham, N.—Senior House Physician and Senior House Surgeon. Salary £75 per annum each. Also Junior House Physician and Junior House Surgeon. Salary £60 per annum each. With residence, board, and laundry. All for six months.

QUEEN'S HOSPITAL FOR CHILDREN, Hackney-road.—House Physician for six months. Salary at rate of £80 per annum, with board, residence, and washing.

READING, ROYAL BERKSHIRE HOSPITAL.—Second House Surgeon for six months. Salary at rate of £80 per annum, with lodging, board, and washing.

ROCHDALE INFIRMARY AND DISPENSARY.—Junior House Surgeon, unmarried. Salary £110 per annum, with board, residence, and laundry.

ROTHERHAM HOSPITAL.—Senior and Junior House Surgeons. Salaries £120 and £100 respectively, with board, lodging, and washing.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—Election of Professors and Lecturers.

ROYAL EYE HOSPITAL, Southwark, S.E.—Junior House Surgeon for six months. Salary £50 per annum, with board and residence. Also Clinical Assistants.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City-road, E.C.—Director of the Pathological Department. Salary £400 per annum. Also Medical Registrar. Salary 100 guineas per annum.

ROYAL LONDON OPHTHALMIC HOSPITAL, City-road, E.C.—Honorary Physician.

ROYAL WATERLOO HOSPITAL FOR CHILDREN AND WOMEN, S.E.—Honorary Physician in charge of Out-patients.

ST. JOHN'S WOOD AND PORTLAND TOWN DISPENSARY.—Third Medical Officer. Salary £50 per annum, &c.

ST. MARK'S HOSPITAL FOR CANCER, FISTULA, AND OTHER DISEASES OF THE RECTUM, City-road, E.C.—House Surgeon. Salary £80 per annum, with board, lodging, and washing.

SALFORD ROYAL HOSPITAL.—Junior House Surgeon and Casualty House Surgeon. Salary at rate of £80 per annum each, with board and residence.

SALFORD UNION INFIRMARY.—Senior and Junior Resident Assistant Medical Officers, unmarried. Salaries £130 and £120 per annum respectively, with apartments, attendance, and rations.

SALISBURY INFIRMARY.—Assistant House Surgeon, unmarried. Salary £75 per annum, with apartments, board, lodging, and washing.

SHEFFIELD, JESSOP HOSPITAL FOR WOMEN.—Assistant House Surgeon, unmarried. Salary £80 per annum, with board, residence, and laundry.

SHEFFIELD ROYAL INFIRMARY.—Ophthalmic House Surgeon for six months. Salary £80 per annum, with board and residence.

SHEFFIELD UNION HOSPITAL, Fircvale.—Resident Assistant Medical Officer, unmarried. Salary £140 per annum, with apartments, rations, &c.

SHREWSBURY, SALOP INFIRMARY.—House Surgeon. Salary £150 per annum, with board, washing, and residence. Also House Physician. Salary at rate of £90 per annum, with board and apartments.

SOUTHAMPTON, ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL.—Junior House Surgeon. Salary at rate of £120 per annum, with rooms, board, and washing.

SOUTHWARK UNION INFIRMARY, East Dulwich-grove, S.E.—Second Assistant Medical Officer and Third Assistant Medical Officer. Salaries at rate of £170 and £160 per annum respectively, with board, lodging, and washing.

STAFFORDSHIRE COUNTY MENTAL HOSPITAL, Cheddleton, Leek.—Junior Assistant Medical Officer. Salary £210 per annum, with board, apartments, washing, and attendance.

STOKE-ON-TRENT, NORTH STAFFORDSHIRE INFIRMARY, Hartshill.—House Physician, unmarried. Also Casualty and Out-patient Officer, unmarried, for six months. Salary at rate of £110 per annum each, with board, residence, and washing.

STROUD GENERAL HOSPITAL.—House Surgeon. Salary £120 per annum, with board, lodging, and washing.

SUNDERLAND BOROUGH ASYLUM, Ryhope.—Assistant Medical Officer. Salary £200 per annum.

SWANSEA EDUCATION COMMITTEE.—Dental Surgeon. Salary £220 per annum.

SWANSEA GENERAL AND EYE HOSPITAL.—Two House Surgeons. Salary £125 per annum, with board, washing, and attendance.

WALSALL AND DISTRICT HOSPITAL.—Senior House Surgeon and Assistant House Surgeon. Salary £150 and £110 per annum respectively, with board, residence, and laundry.

WEST HAM AND EASTERN GENERAL HOSPITAL.—Junior House Physician and Junior House Surgeon. Salary at rate of £75 per annum, with board, residence, and washing.

WEST LONDON HOSPITAL, Hammersmith, W.—Ophthalmic Surgeon.

WEST RIDING OF YORKSHIRE.—Dispensary Tuberculosis Officer. Salary £400 per annum.

WESTMINSTER HOSPITAL.—Surgical Registrar. Salary £50 per annum.

WESTMORLAND CONSUMPTION SANATORIUM AND HOME, Meathop, Grange-over-Sands.—Second Assistant Medical Officer. Salary £150 per annum.

WIGAN, ROYAL ALBERT EDWARD INFIRMARY AND DISPENSARY.—Junior House Surgeon. Salary £100 per annum, with board, apartments, and washing.

WOLVERHAMPTON AND MIDLAND COUNTIES EYE INFIRMARY.—House Surgeon. Salary £100 per annum, with apartments, board, and laundry.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—House Surgeon for six months. Salary at rate of £125 per annum, with board, rooms, and laundry.

WOLVERHAMPTON COUNTY BOROUGH EDUCATION COMMITTEE.—Assistant School Medical Officer. Salary at rate of £300 per annum.

WOOLWICH INFIRMARY, Plumstead.—Assistant Resident Medical Officer, unmarried. Salary £180 per annum, with apartments, rations, and washing.

WREXHAM INFIRMARY.—Resident House Surgeon. Salary £120 per annum, with board, lodging, and washing.

YORK, NORTH RIDING ASYLUM, Clifton.—Assistant Medical Officer. Salary £200 per annum, with board, apartments, washing, and attendance.

THE Chief Inspector of Factories, Home Office, London, S.W., gives notice of vacancies for Certifying Surgeons under the Factory and Workshop Acts at Croom, in the county of Limerick; at Sleivereagh, in the county of Cork; and at Templemartin, in the county of Cork.

Births, Marriages, and Deaths.

BIRTHS.

ATKINSON.—On April 29th, at Elton Cottage, Newnham-on-Severn, Glos., the wife of Jackson Atkinson, M.B., B.S. Lond., of a daughter.

CLEMINSON.—On May 3rd, at Albert-road, Gloucester Gate, Regent's Park, the wife of Frederick John Cleminson, M.C., F.R.C.S., of a son.

GODSON.—At The Craig, Laxey, Isle of Man, the wife of John Edward Godson, M.D., of a daughter.

PINCHING.—On April 26th, at Frampton-on-Severn, Stonehouse, Gloucestershire, the wife of W. G. Pinching, M.R.C.S., L.R.C.P., of a daughter.

STRONG.—On April 25th, at Magor House, Mon., the wife of Gravenor Robert Strong, M.B., B.S. Lond., of a daughter.

WHITAKER.—On May 3rd, at Evershot, Dorset, the wife of Alfred Gurth Whitaker, M.R.C.S., L.R.C.P., of a daughter.

MARRIAGES.

HOSFORD—WALKER.—On April 30th, at St. Pancras Church, London, by the Rev. L. E. Metcalfe, vicar, Alfred Stroud Hosford, M.R.C.S. Eng., L.R.C.P. Lond., youngest son of the late Dr. John Stroud Hosford and Mrs. Hosford, of The Grove, Stratford, E., to Beth, daughter of the late Robert Walker, Esq., of The Banks, Horsley, Wylam-on-Tyne.

PARKIN—FENWICK.—On April 29th, at Matfen Parish Church, by the Rev. C. C. Petch, Alfred Parkin, M.D., M.R.C.P., F.R.C.S., son of the late George Parkin and Mrs. Parkin, of Gateshead, to Elizabeth, daughter of the late Matthew Fenwick, of Steelridge, and Mrs. Fenwick, of South Clarewood, Corbridge. At Home—56, Jesmond-road, Newcastle-on-Tyne, June 10th and 11th.

THOMAS—CODRINGTON.—On April 28th, at Holy Trinity Church, Exmouth, Robert Stanley Thomas, M.D. Cantab., to Violet Francis, youngest daughter of Colonel and Mrs. Codrington, Chippenham House, Exmouth.

WARD—NEWMAN.—On April 25th, at St. Margaret's, Westminster, by the Rev. Geoffrey Gordon, chaplin to the Westminster Hospital, Gordon Reginald, second son of the late John Barron Ward, of Streatham, S.W., and Mrs. Ward, of 2, Perham-crescent, West Kensington, to Gladys Mary, daughter of the late Frederick Newman, of Barnsley, Yorks, and Mrs. Newman.

DEATHS.

ABERCROMBIE.—On April 30th, at Augill Castle, Brough, Westmorland, John Abercrombie, M.D. Cantab.

HOW.—On April 30th, suddenly, of cerebral hæmorrhage, Frederick Field Lawrence, L.M.S.S.A.

KEITH.—On May 1st, at St. Ives, Swanage, William Gregory Keith, M.B., C.M. Edin., L.R.C.S., L.R.C.P. Edin., late Colonial Surgeon Ceylon Medical Service, aged 68.

PINDER.—On May 1st, Thomas Henry Pinder, Surgeon, of Edenwood, Wilmslow, and Temple Chambers, Brazennose-street, Manchester, in his 71st year.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

MOSQUITO EXTERMINATION IN KINGSTON: JAMAICA AND THE YELLOW FEVER PROBLEM.

IN the joint session of the Sections of Tropical Medicine and Hygiene and of Naval and Military Medicine at the International Medical Congress in 1913, Dr. J. J. Van Loghem, whose experience as director of the Institute of Tropical Hygiene in Amsterdam lends weight to his words, referred to the very real danger of the transference of yellow fever to Asia and Australia on the opening of the Panama Canal. In our issue of Jan. 31st a leading article dealt with the protection of India from yellow fever. Undoubtedly the West Indies and the East Indian Islands, as being the nearest possible inflammable centres, are equally or more interested. Dr. Van Loghem, in his remarks already cited in THE LANCET of August 23rd, 1913 (p. 570), referred to his own personal experience as to the frequency of stegomyia in the Dutch East Indian Archipelago and on board ships trading between Dutch East Indian ports. The services rendered by sanitary science in stamping out yellow fever and malignant malaria in the Canal Zone were fully considered about a year ago (March 29th, 1913) in a leading article in THE LANCET. The subject is, in short, engaging medical attention everywhere. In a recent report by Dr. Angus G. Macdonald, the medical officer of health of Kingston, Jamaica, the systematic steps there taken for the extinction of the stegomyia and the education of the people in specific sanitary measures are detailed. Measures are administrative and educative. The administrative consist of house-to-house visitations, which engage the part-time work of seven sanitary inspectors, special mosquito investigation, to which one sanitary inspector devotes his whole time, the removal of all water-holding receptacles on dumping grounds, and so forth. When larvæ are found at the house-to-house search leaflets are distributed detailing the measures to be taken for exterminating them, and these measures are, moreover, carefully explained. A second visit is paid in such cases in three weeks and a third three weeks later. If on either revisit larvæ are still found, the chief sanitary inspector or the medical officer himself pays a visit and repeated instruction is persisted in. But little opposition is met with. As to educative measures, the entire staff of the Health Department are "trained to be apostles of hygiene," so that an attempt is made to reach the small things of life in the homes of the people, and the interest of the schools and the churches is also enlisted in the work of special education. Larvæ have been found in order of frequency in barrels and jars, tubs and pans, flower vases and pots, cast bottles and tins, bark pans with floor-staining liquid, a chicken pan, shells, cocoanuts, calabashes, gourds, and so forth. They have not been found in tree holes or under dripping taps. Gutters, "faulty down-outs," sanitary arrangements generally, and the numerous receptacles about wharves are kept under supervision always, irrespective of incrimination as mosquito harbourers. Dr. Macdonald, from recent observation of the Panama Canal Zone, is not afraid to say that the stegomyia limitation in Kingston compares favourably with that in Colon or Panama. Certainly the results of recent work, as indicated in the tables submitted with the report, could hardly be bettered. In Kingston in 1912, with an estimated population of 57,800, were paid 22,906 visits, with 1389 finds of larvæ, a ratio of 6 per cent.; in 1913, with an estimated population of 58,312, 24,352 visits were made, with only 378 finds of larvæ, or only 1·55 per cent. Confirmatory evidence of the most practical kind appears in the malaria returns of the Public Hospital, yellow fever being entirely absent. The admissions were 723 in 1910, 349 in 1911, 95 (of which 32 came from outside Kingston) in 1912, and 113 (57 from outside) in 1913. The decline in the malaria mortality is even more marked; it fell from 126 in 1910 to 72 in 1911, and to 17 in 1912 and 1913. These figures establish a very satisfactory record for Kingston, and suggest that this erstwhile hotbed of "Yellow Jack" will be well able to take care of itself.

CARAVANNING.

THE caravan season is here again. Mr. Harris Stone, the secretary of the Caravan Club, has a brief article on the Coming Growth of Caravanning in *The Selborne Magazine* for May, in which he points out the great advantages of caravan life for people with a fixed but very limited

income. A small fixed income at the present day means fixture, localisation, stagnation; no hope of change, no looking forward to brighter prospects. Caravanning offers freedom, movement, variety, open-air life, a riddance of the unnecessary impedimenta with which we incontinently encumber ourselves, an adjustment of the environment to oneself instead of *vice versâ*. It is all this to the energetic, hardworking, methodical, and educated mind, and far superior for such than a small home or a flat; but it possesses no attraction for the loafer, the thriftless, the grumbler, and the incapable. There are people who have lived in their caravans, owning no other home, for years, and many who now spend the summer thus.

"MILLIBARS."

To the Editor of THE LANCET.

SIR,—Can any of your readers tell me how the "unit" on the new scale for measuring "atmospheric" pressure has been arrived at? In the Weather Reports this morning the *Times* gives the following equivalents:—

1024·1 millibars = 30·24 inches.
1016·4 ,, = 30·02 ,,

From these figures I find that 1000 millibars = 29·53 inches, or 750 millimetres. Since 760 millimetres (or 29·92 inches) is the standard barometric pressure, one would have imagined that 1000 millibars = 760 millimetres would have been more accurate.

I am, Sir, yours faithfully,
New Southgate, N., May 4th, 1914. BETA.

THE KINEMA AND THE CHILD'S HEALTH.

Dr. G. W. M. Joseph, medical officer of health of Warrington, in his annual report states that kinematograph exhibitions may have a potent effect in spreading infectious and contagious diseases. The health of children may also be affected unfavourably by the action of the moving pictures on the eyes, by sanitary defects, and by late hours. It would appear that defective children who are being treated at the clinic are being excluded from school, but they may go to picture shows. Dr. Joseph is of opinion that no children of school-age should be admitted to evening kinema performances.

AN UNUSUAL CASE OF SELF-MUTILATION.

To the Editor of THE LANCET.

SIR,—In relation to Lieutenant-Colonel C. Milne's remark in THE LANCET of April 18th that "it is inconceivable that the English proverb, 'To cut off one's nose to spite one's face,' ever had a literal application," I have to record a case now in this asylum of a man aged 35 who 10 years ago not only cut off his nose but his testicles as well.

I am, Sir, yours faithfully,
H. WILLIAM DUDGEON, M.D. Durh.
Khanka Lunatic Asylum, Egypt.

*** In this connexion, we recall the extraordinary case of the man who tore his tongue out by the root, reported in THE LANCET of Feb. 5th, 1898, p. 384.—ED. L.

EARLY MEDICAL MOTOR-CARS.

To the Editor of THE LANCET.

SIR,—I remember reading in THE LANCET of March 20th, 1897, that a physician in Youngstown, Ohio, Dr. Carlos Booth, was the first medical man in the United States to make use of a motor carriage for the purpose of working his practice. Further back still I recall in THE LANCET of Jan. 4th, 1896, a long article, with an illustration of a quaint-looking motor-car, suggesting that medical men might be beginning to take an interest in these vehicles for the purposes of their practices. Fourteen years later, in an article in your issue of Jan. 1st, 1910, on the Medical Profession and the Early History of the Motor-car, it was stated that although the first electric carriages for ordinary roads were used in 1889 by Mr. Magnus Volk, of Brighton, the first petrol car was introduced into England from France in 1895. It might be interesting to put on record who was the first British medical man to use a motor-car in his practice.

I am, Sir, yours faithfully,
London, May 4th, 1914. HISTORICUS.

"PAN YAN" PICKLE.

Messrs. Maconochie Bros., Ltd. of Millwall, London, E., have forwarded to us a specimen of this pickle, which they state is a combination of the finest fruits, condiments, spices, and vegetables. Pickles have an important place in the well-ordered dietary, and we welcome the assurance of a thoroughly reliable firm that care has been taken in this preparation to select first-class wholesome materials for the purpose. The Pan Yan pickle has a very pleasant taste, and renders certain foods, which are otherwise unappetising owing to monotony or absence of flavour, more easily enjoyed and digested. Chemical examination showed the absence of objectionable ingredients.

SALVARSAN SUPPOSITORIES.

W. H.—A small portion is absorbed which is often sufficient to produce a beneficial effect upon systemic lesions, without irritating the rectal mucous membrane. But suppositories of salvarsan can hardly be expected to cure the disease, and we know of no case in which they should be used in preference to an injection.

B. R. K. (Lahore).—The address of the New York Association for Improving the Condition of the Poor is 105 E Twenty-second Street, New York City, U.S.A. The secretary may be able to supply the full report on the home treatment of pulmonary tuberculosis to which our correspondent refers.

Miss G. B. Jacobi.—In our paragraph on Medical Practice in Sweden last week the words "first class" were meant to be taken literally, as might have been gathered from what went before.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

Medical Diary for the ensuing Week.

SOCIETIES.

ROYAL SOCIETY, Burlington House, London, W.

THURSDAY.—Dr. A. D. Waller: The Various Inclinations of the Electrical Axis of the Human Heart.—Part Ia, The Normal Heart. Effects of Respiration.—Dr. D. H. Scott, foreign secretary to the Royal Society, and Prof. E. C. Jeffrey: On Fossil Plants showing Structure from the Base of the Waverley Shale of Kentucky.—Mr. F. Kidd: The Controlling Influence of Carbon Dioxide in the Maturation, Dormancy, and Germination of Seeds—Part II. (communicated by Dr. F. F. Blackman).—Dr. D. Thomson and Dr. G. J. Thomson: The Cultivation of Human Tumour Tissue in Vitro (communicated by Sir Ronald Ross).—Mr. H. G. Thornton and Mr. G. Smith: On the Nutritive Conditions Determining the Growth of Certain Freshwater and Soil Protista (communicated by Prof. G. C. Bourne).

ROYAL SOCIETY OF MEDICINE, 1, Wimpole-street, W.

MONDAY.
MEETING OF FELLOWS: at 5 P.M.

Demonstration:
Dr. David Thomson: A Microscopic and Lantern Demonstration on the Cultivation of Various Tissues in Vitro, including Human Tumour Tissue.

TUESDAY.
SECTION OF SURGERY (Hon. Secretaries—J. Murray, Raymond Johnson): at 5.30 P.M.
Annual Meeting.—Election of Officers and Council for Session 1914-1915.

Paper:
Mr. G. Lenthal Cheatle, C.V.O., C.B.: The Relation of Ducts and Acini to Cysts and Cancer of the Breast.

WEDNESDAY.
SECTION OF SURGERY: SUB-SECTION OF PROCTOLOGY (Hon. Secretaries—P. Lockhart Mummery, W. Sampson Handley): at 5 P.M.

Cases:
Mr. P. Furnivall: (1) Three Cases of Multiple Polypi of the Rectum and Large Intestine; (2) Case of Epithelioma Starting in the Seat of a Chronic Fissure of the Anus.
Mr. Ernest Miles: Two Cases of Total Excision of the Rectum for Procidentia.
Mr. D. Drew: Four Cases Illustrating Results of Abdomino-perineal Excision of the Rectum for Cancer.

Specimens:
Mr. R. W. Vick: Specimens Illustrating Diverticulitis.

Notes of Cases:
Dr. Hertz: Notes of Four Cases of Polypus of the Rectum in One Family.
Mr. P. Lockhart Mummery: Notes of a Case of Hæmatoma of the Broad Ligament Simulating Sarcoma of the Rectum.

FRIDAY.
SECTION OF OTOLOGY (Hon. Secretaries—G. J. Jenkins, W. M. Mollison): at 5 P.M.
Annual Meeting.—Election of Officers and Council for Session 1914-1915.

Cases, Specimens, &c.:
By Mr. Richard Lake, Dr. H. J. Davis, Dr. Jobson Horne, and others.

SECTION OF ELECTRO-THERAPEUTICS (Hon. Secretaries—Cecil R. C. Lyster, S. Gilbert Scott): at 7.30 P.M.
The ANNUAL MEETING and DINNER will be held at the RESTAURANT JULES, 86, JERMYN STREET, S.W. Tickets 10s. 6d., exclusive of wine. Guests may be invited. The President (Mr. Thurstan Holland) will be in the chair. An early answer to Mr. S. Gilbert Scott, 6, Bentinck-street, W., will oblige.
(Council Meeting will be held before the dinner at 7 o'clock, at the same address.)

MEDICAL SOCIETY OF LONDON, 11, Chandos-street, Cavendish-square, W.

MONDAY.—8 P.M., General Meeting. Election of Officers, &c. 8.30 P.M., Discussion on a Case of Ascites and its Treatment (introduced by Dr. F. de Havilland Hall, followed by Sir Richard D. Powell, Sir William Osler, Dr. Hale White, Dr. R. Smith, Mr. W. G. Spencer, and Dr. M. Fletcher).

SOUTH-WEST LONDON MEDICAL SOCIETY, Bolingbroke Hospital, Wandsworth Common, S.W.
WEDNESDAY.—9 P.M., Discussion on the Treatment of Constipation (opened by Mr. H. B. A. Pearson).

BRITISH OTO-LARYNGOLOGICAL SOCIETY, 11, Chandos-street, Cavendish-square, W.
WEDNESDAY.—4 P.M., Cases.

UNITED SERVICES MEDICAL SOCIETY, Royal Army Medical College, Grosvenor-road, S.W.
THURSDAY.—5 P.M., Major A. J. Hull, R.A.M.C.: The Transport of Wounded in War.

NORTH LONDON MEDICAL AND CHIRURGICAL SOCIETY, Board Room of the Great Northern Central Hospital, Holloway-road, N.
THURSDAY.—9 P.M., Presidential Address:—Dr. T. W. Parry: Prehistoric Man and his Early Efforts to Combat Disease.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies-street, W.C.
MONDAY.—4 P.M., Dr. H. Davis: Clinique (Skin). 5.15 P.M., Lecture:—Dr. R. F. Fox: Effects of Heat and Cold.
TUESDAY.—4 P.M., Dr. J. Taylor: Clinique (Medical). 5.15 P.M., Lecture:—Dr. R. F. Fox: Methods of Hydrotherapy.
WEDNESDAY.—4 P.M., Mr. R. Howard: Clinique (Surgical). 5.15 P.M., Lecture:—Dr. R. F. Fox: Medicinal Springs and Baths.
THURSDAY.—4 P.M., Dr. H. Campbell: Clinique (Medical). 5.15 P.M., Lecture:—Dr. R. F. Fox: Indications of Hydrological Treatment.
FRIDAY.—4 P.M., Dr. J. Donelan: Clinique (Ear, Nose, and Throat).

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith-road, W.
MONDAY.—10 A.M., Dr. Simson: Diseases of Women. 10.30 A.M., Medical Registrar: Demonstration of Cases in Wards. 12 noon, Dr. Bernstein: Pathological Demonstration. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. Armour: Operations. Dr. Pritchard: Bacterial Therapy Department. Mr. B. Harman: Diseases of the Eye. 5 P.M., Lecture:—Mr. Baldwin: Diseases of the Rectum.
TUESDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. Dr. Owen: Demonstration of Cases in Wards. 12 noon, Mr. T. Gray: Demonstration of Fractures, &c. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. Baldwin: Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. Dr. Pernet: Diseases of the Skin. 5 P.M., Lecture:—Mr. Baldwin: Diseases of the Rectum.
WEDNESDAY.—10 A.M., Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. 11 A.M., Mr. Souttar: Demonstration of Minor Operations. 12 noon, Lecture:—Mr. Souttar: Abdominal Diagnosis. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. Pardoe: Operations. Dr. Simson: Diseases of Women and Diseases of the Eye. 5 P.M., Lecture:—Mr. Baldwin: Diseases of the Rectum.
THURSDAY.—9 A.M., Dr Bernstein: Bacterial Therapy Department. 10.30 A.M., Dr. Simson: Gynæcological Demonstration. 12 noon, Lecture:—Dr. G. Stewart: Neurological Cases. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. Armour: Operations. Mr. B. Harman: Diseases of the Eye. 5 P.M., Lecture:—Mr. Baldwin: Diseases of the Rectum.
FRIDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. 10.30 A.M., Surgical Registrar: Demonstration of Cases in Wards. 12.15 P.M., Lecture:—Dr. Bernstein: Applied Pathology. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. Baldwin: Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. Dr. Pernet: Diseases of the Skin. 5 P.M., Lecture:—Mr. Baldwin: Diseases of the Rectum.
SATURDAY.—10 A.M., Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. Mr. B. Harman: Diseases of the Eye. 12 noon, Lecture:—Mr. Souttar: Surgical Anatomy of the Abdomen. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. Pardoe: Operations.

LONDON SCHOOL OF CLINICAL MEDICINE, Dreadnought Hospital, Greenwich.
MONDAY.—Out-patient Demonstrations:—10 A.M. Dr. H. B. Carlill: Medical. Mr. H. Curtis: Surgical. 12 noon, Mr. G. N. Biggs: Throat, Nose, and Ear.—2.15 P.M., Mr. W. Turner: Surgery. 3 P.M., Mr. W. Turner: Operations. 3.15 P.M., Sir Dyce Duckworth: Medicine. 4.30 P.M., Dr. G. Holmes: Demonstration of Neurological Cases.
TUESDAY.—Out-patient Demonstrations:—10 A.M., Dr. C. E. Zundel: Medical. Mr. Cole: Surgical. 12 noon, Dr. H. MacCormac: Skin.—2 P.M., Mr. L. McGavin: Operations. 2.15 P.M., Mr. R. Carling: Surgery. 3.15 P.M., Dr. G. Rankin: Medicine. 4.15 P.M., Sir Malcolm Morris: Skin. 4.30 P.M., Special Lecture:—Dr. T. Lister: The Artificial Pneumothorax.
WEDNESDAY.—Out-patient Demonstrations: 10 A.M., Dr. H. B. Carlill: Medical. Mr. Cecil Rowntree: Surgical. 11 A.M., Mr. R. H. Bickerton: Eye.—2 P.M., Mr. L. V. Cargill or Mr. Choyce: Operations. 2.15 P.M., Dr. F. Taylor: Medicine. 3.15 P.M., Mr. Cargill: Eye Clinique. 4.30 P.M., Mr. C. C. Choyce: Surgery. 4.30 P.M., Special Lecture:—Dr. J. Taylor: Some Clinical and Pathological Aspects of Nervous Disease.
THURSDAY.—Out-patient Demonstrations:—10 A.M., Dr. H. R. Prentice: Medical. Mr. H. Curtis: Surgical. 12 noon, Mr. G. N. Biggs: Throat, Nose, and Ear.—2 P.M., Mr. R. Carling or Mr. W. Turner: Operations. Dr. A. Davies: Pathological Demonstration. 3.15 P.M., Dr. R. Wells: Medicine. 4.30 P.M., Special Lecture:—Sir StClair Thomson: Tuberculosis of the Air-passages.
FRIDAY.—Out-patient Demonstrations:—10 A.M., Dr. C. E. Zundel: Medical. Mr. Cole: Surgical. 12 noon, Dr. H. MacCormac: Skin.—2 P.M., Mr. L. McGavin: Operations. 2.15 P.M., Sir John Rose Bradford: Medicine. 3.15 P.M., Mr. L. McGavin: Surgery. 3.15 P.M., Lecture:—Mr. L. McGavin: Gall-stones and the Surgery of the Bile Ducts.
SATURDAY.—Out-patient Demonstrations: 10 A.M., Dr. H. R. Prentice: Medical. Mr. Cecil Rowntree: Surgical. 11 A.M., Mr. R. H. Bickerton: Eye.—10 A.M., Col. Barry: Radiography.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.
MONDAY.—Clinics:—10.30 A.M., Surgical Out-patient (Mr. R. Gillespie). 2.30 P.M., Medical Out-patient (Dr. T. R. Whipham); Gynæcological (Dr. Banister). 3 P.M., Medical In-patients (Dr. R. M. Leslie).
TUESDAY.—2.30 P.M., Operations. Clinics:—Medical Out-patient (Dr. A. G. Auld); Surgical (Mr. Howell Evans); Nose, Throat, and Ear (Mr. H. D. Gillies). X Ray and Electrical Methods (Dr. Metcalfe). 3.30 P.M., Medical In-patient (Dr. Whiting).
WEDNESDAY.—Clinics:—2 P.M., Throat Operations (Mr. Gillies). 2.30 P.M., Children's Out-patient (Dr. T. R. Whipham); Skin (Dr. G. N. Meachen); Eye (Mr. Dorell).
THURSDAY.—2.30 P.M., Gynæcological Operations (Dr. A. E. Giles). Clinics:—Medical Out-patient (Dr. A. J. Whiting); Surgical (Mr. Carson); X Rays and Electrical Methods (Dr. Metcalfe).
FRIDAY.—2.30 P.M., Operations. Clinics:—Medical Out-patient (Dr. A. G. Auld); Surgical (Mr. R. Gillespie); Eye (Mr. R. P. Brooks). 3 P.M., Medical In-patient (Dr. G. P. Chappel).

ST. THOMAS'S HOSPITAL MEDICAL SCHOOL (UNIVERSITY OF LONDON), Albert Embankment, S.E.
Lectures in Advanced Medical Subjects:—
TUESDAY.—5 P.M., Dr. H. Maclean: Carbohydrate Metabolism in Health and in Diabetes.

GUY'S HOSPITAL MEDICAL SCHOOL, London Bridge, S.E.
Course of Lectures on Industrial Medicine:—
FRIDAY.—Lecture II.:—Dr. F. Shufflebotham: The Post-mortem Appearances Associated with Lead Poisoning.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, Medical School, City-road, E.C.
MONDAY.—1.30 P.M., Department for the Prevention of Consumption. 2 P.M., Cardiac Department, Dr. Stott; Out-patient Department, Dr. Phear, Dr. S. Thompson. 3 P.M., Wards, Dr. Phear.
TUESDAY.—9 A.M., Laryngological Department, Mr. Mant. 1.30 P.M., Department for the Prevention of Consumption. 2 P.M., Out-patient Department, Dr. M. Leslie, Dr. B. King; Operations, Mr. A. Evans. 3 P.M., Wards, Dr. White. 4 P.M., Wards, Dr. M. Leslie
WEDNESDAY.—2 P.M., Wards, Dr. A. Davies; Out-patient Department, Dr. Drysdale, Dr. Kellie. 4 P.M., Wards, Dr. Drysdale. 4.30 P.M., Roentgen Ray Department, Dr. Jordan.
THURSDAY.—9.30 A.M., Dental Department, Mr. G. Thomson. 10 A.M., Cardiac Department, Dr. Stott. 1.30 P.M., Department for the Prevention of Consumption. 2 P.M., Out-patient Department, Dr. Phear, Dr. S. Thompson. 4.30 P.M. Laryngological Department, Mr. Mant.
FRIDAY.—1.30 P.M., Department for the Prevention of Consumption. 2 P.M., Wards, Dr. Calvert; Out-patient Department, Dr. M. Leslie, Dr. B. King. 5 P.M., Lecture-Demonstration:—Dr. Calvert: The Treatment of Pulmonary Tuberculosis by Artificial Pneumothorax.
SATURDAY.—10 A.M., Out-patient Department, Dr. Drysdale, Dr. Kellie. 11.30 A.M., Roentgen Ray Department, Dr. Jordan.

LONDON HOSPITAL MEDICAL COLLEGE (UNIVERSITY OF LONDON), Clinical Theatre, London Hospital, Mile End-road, E.
MONDAY.—Lecture on Tuberculosis.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.
Course of Demonstrations for Post-Graduates:—
FRIDAY.—4 P.M., Dr. E. H. Colbeck: Demonstration of Heart Cases.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen-square, Bloomsbury, W.C.
TUESDAY.—3.30 P.M., Clinical Lectures:—Dr. R. Russell: Syphilitic Affection of the Nervous System.
FRIDAY.—3.30 P.M., Clinical Lecture:—Dr. G. Stewart: Compression Paraplegia.

THE THROAT HOSPITAL, Golden-square, W.
MONDAY.—5.15 P.M., Special Demonstration of Selected Cases.
THURSDAY.—5.15 P.M., Clinical Lecture.

LONDON LOCK HOSPITAL, 91, Dean-street, Soho, W.
Special Course of Instruction in Venereal Diseases, for Post-Graduates and Students, with Practical Demonstrations of the Various Methods of Treatment:—
MONDAY.—Clinics:—1 P.M., Mr. Ryall; 6 P.M., Mr. Gibbs.
TUESDAY.—Clinics:—2 P.M., Mr. Lane; 6 P.M., Mr. Paterson.
WEDNESDAY.—Clinic:—6 P.M., Mr. Shillitoe.
SATURDAY.—Clinic:—2 P.M., Mr. McDonagh.

MANCHESTER HOSPITALS POST-GRADUATE CLINICS.
TUESDAY.—MANCHESTER AND SALFORD HOSPITAL FOR SKIN DISEASES, Quay-street.—4.30 P.M., Dr. G. H. Lancashire: Some Common Parasitic Skin Diseases.
WEDNESDAY.—ROYAL INFIRMARY—4.30 P.M., Dr. Melland: Some More Minor Ailments.
THURSDAY.—ANCOATS HOSPITAL—4.30 P.M., Dr. W. J. S. Bythell: Ionisation and Electrolysis.

UNIVERSITY OF SHEFFIELD, at the Royal Hospital, West-street, Sheffield.
Post-Graduate Course on Syphilis:—
TUESDAY.—3 P.M., Dr. Hallam and Dr. Skinner: Clinical Diagnosis. Demonstration of Type Cases. Clinical Methods of Detecting Spirochætes in Lesions.
FRIDAY.—3 P.M., Dr. Hallam and Dr. Skinner: Principles of Treatment. Local and General. Mercury, Methods of Administration, Dosage, &c. Iodides. Salvarsan and Neosalvarsan, Method of Preparation, Dosage, Modes of Administration, (*a*) intramuscular, (*b*) intravenous. Complications. Contra-indications. Demonstration of Technique.

UNIVERSITY OF LEEDS, Great Hall of the University, College-road.
Special Lectures on Medical Subjects:—
WEDNESDAY.—4 P.M., Mr. T. S. P. Strangeways: Rheumatoid Arthritis and Allied Conditions.

ROTUNDA HOSPITAL POST-GRADUATE COURSES, Dublin.

MONDAY.—10 A.M., Obstetrical Lecture: Version. 11 A.M., Examination of Patients and Minor Operations.
TUESDAY.—10 A.M., Major Operations.
WEDNESDAY.—10 A.M., Obstetrical Lecture: Extraction in Breech Cases. 11 A.M., Examination of Patients and Minor Operations.
THURSDAY.—10 A.M., Major Operations.
FRIDAY.—10 A.M., Gynæcological Lecture: The Nature and Diagnosis of Ovarian Tumours. 11 A.M., Examination of Patients and Minor Operations.

For further particulars of the above Lectures, &c., see Advertisement Pages.

A DIARY OF CONGRESSES.

THE following Congresses, Conferences, and Exhibitions are announced.

In 1914:—

May 1st–Nov. 1st (Lyons).—International Town Hygiene Exhibition.
,, 15th–Oct. 15th (Berne).—Swiss National Exhibition.
,, 18th–21st (London, Imperial Institute).—Victoria League Imperial Health Conference.
May–October (London, Shepherd's Bush).—Anglo-American Exposition.
June 8th–10th (Berne).—Seventh International Dairy Congress.
,, 15th–18th (Portsmouth).—International Abolitionist Conference (Prostitution).
,, 18th–24th (London, Church House, Westminster).—International Conference on the Blind.
June–July (Groningen).—University of Groningen 300th Anniversary Celebration.
July 6th–11th (Blackpool).—Twenty-ninth Congress of the Royal Sanitary Institute.
,, 7th–10th (St. John, N.B.).—Canadian Medical Association.
,, 8th–10th (Oxford).—Ophthalmological Congress.
,, 15th–20th (Edinburgh).—Congress of the Royal Institute of Public Health.
,, 21st–23rd (Chester).—British Pharmaceutical Conference.
,, 27th–31st (London).—Fifth Annual Session of the Clinical Congress of Surgeons of North America.
,, 28th–31st (Aberdeen).—Eighty-second Annual Meeting of the British Medical Association.
Aug. 3rd–8th (London).—Sixth International Dental Congress.
,, 10th–15th (St. Petersburg).—Twelfth International Congress of Ophthalmology.
Sept. 7th–12th (Berne).—International Congress for Neurology, Psychiatry, and Psychology.
,, 10th–12th (Fort William and Port Arthur, Ontario).—Fourth Annual Congress of the Canadian Public Health Association.
,, 21st–26th (Vienna).—Third International Congress on Diseases of Occupation.
,, 30th–Oct. 3rd (Brussels).—Fourteenth French Congress of Medicine.
Oct. 31st–Nov. 2nd (Berlin).—First Congress of the International Society for Sexual Research.
Nov. 15th–21st (London).—Health Week. (Under the direction of the Health Week Committee appointed by the Royal Sanitary Institute.)
(St. Petersburg).—Third Mendeléeff Congress at Pure and Applied Chemistry and Physics.

In 1915:—

May 31st–June 5th (London, South Kensington).—Sixth International Congress of Social Work and Service.
Sept. 8th (begins) (Manchester).—Meeting of the British Association.

EDITORIAL NOTICES.

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(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, May 6th, 1914.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rain-fall.	Solar Radio in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks.
April 30	29·98	N.E.	...	72	53	46	46	48	Overcast
May 1	30·20	N.E.	...	87	51	42	42	48	Fine
,, 2	30·38	S.E.	...	103	54	45	42	47	Cloudy
,, 3	30·12	S.	0·15	103	64	46	49	53	Cloudy
,, 4	29·81	S.W.	...	115	65	49	56	58	Cloudy
,, 5	29·75	W.	0·19	103	59	52	52	56	Cloudy
,, 6	29·74	WNW	...	103	58	51	51	55	Cloudy

The following journals, magazines, &c., have been received:—Archives of the Roentgen Ray, International Journal of Surgery, Annales de Gynécologie et d'Obstétrique, Therapeutic Gazette, Ophthalmoscope, Journal of the Royal Sanitary Institute, Journal of Hygiene, Archives of Pediatrics, Clinique Ophthalmologique, Post Graduate, Journal d'Urologie, Edinburgh Medical Journal, Polyclinic, British Dental Journal, Journal of State Medicine, Cleveland Medical Journal, British Journal of Dental Science, Maryland Medical Journal, Archives Générales de Chirurgie.

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